

THE AUTOMOBILE

LOWELL'S RACE HAS A FOREIGN CAR WINNER

By C. F. MARDEN.

LOWELL, MASS., Sept. 7.—Louis P. Strang added more laurels to the crown of victory to-day by winning the 254.4-mile Lowell road race on a 10.6-mile circuit in 4 hours 42 minutes 34 seconds. He drove the 60-horsepower Isotta Fraschini, the same make in which he won the Savannah and Briarcliff races, and averaged 53.6 miles an hour, faster than had been thought possible. Strang was accompanied by Leo Anderson as mechanician. The car ran perfect from start to finish, and Strang, using Michelin tires, had little trouble, being bothered in this respect not at all until near the finish in the last lap. Strang drove a magnificent race, taking the bad corners easily, and dashing up the stretch of boulevard at remarkable speed. He had four laps on his nearest competitor, the Buick driven by Burman, which, however, was disqualified in the twenty-first round, the referee allowing a protest that was filed by entrants of other cars. The protest was based on the claim that the conditions of the race had been violated, outside help being employed in making repairs on the car. The Buick was stopped at the end of the twenty-first lap, and the time from the twelfth lap was wiped out. The Buick's elapsed time for twenty rounds was 4:41:04. The race was well managed. There was only one arrest—a negro boy being taken up for gambling, and there were no injuries of a serious nature. The crowd kept off the track. Some cars were exceedingly unfortunate with tires, the Fiat and the Berliet being especially troubled in this respect and losing much time.

Second place was won by the 60-horsepower Berliet, entered by the Park Square Auto Station of Boston, and driven by Harry F. Grant. This car had much tire trouble, but despite this averaged 40.7 miles an hour. It was Grant's first road race, and he received much well-deserved praise for his good work.

The Knox finished third, its elapsed time being 6:33:29. The Fiat was fourth in 6:38:32. The Knox and Fiat had a close race in the last lap, and the excitement held the crowd better than in any previous important road race in this country.

Weather and road conditions could not have been better. Sunday there was a rain, and it beat down the roads, which already had been oiled and rolled until they were as near perfect as possible. The rain also improved the edges, making the conditions for passing on the back stretch much better than they otherwise would have been. Following the rain came a brisk wind, and the sun rose bright in the morning, ushering in an ideal September day, the sky being cloudless when the hour of starting approached. At that time there was a tremendous crowd all along the circuit of 10.6 miles. The five miles of boulevard was double lined on one side with cars, and on the other side was a dense mass of humanity that led, some into Lowell by train, trolley, and on foot, from all over New England. The big grandstand filled more slowly, as seats there were reserved.

Among the early comers was Congressman Butler Ames, the donor of the trophy. He occupied a box in the front of the grandstand, and in front of his box, opposite the starting line, was the massive silver cup for which the seven cars raced the 254.4 miles, twenty-four times around the circuit. The course was well fenced, and a large force of Lowell police and several hundred militiamen, sworn in as special officers, kept back the crowd very efficiently. The grandstand was admirably located, commanding a view of nearly a mile down the boulevard and half as far in the other direction.

The cars were early at the course, and Starter Wagner had them lined up in order a full half-hour before the first car was due to start. In front was the Simplex, driven by Frank Lescault, with Thomas Colorder were the Fiat, driven by George H. Robertson, with Glen Ethredge as mechanician; Lewis Strang and his Isotta had Leo Anderson as his companion; the Buick was fourth in line, with R. Burman at the wheel and John H. Le Cain by his side. Fifth place, that was to have been occupied by Al. Poole's Isotta, was empty, but Poole was in the grandstand to witness the race, despite his broken col-



Strang and Winning Isotta in Full Cry.



Berliet "60," Which Had Much Tire Trouble, but Landed In Second Place in Good Style, a Novice at the Wheel.

lar bone, received in the accident that put his car out of commission Saturday. The smaller Knox was sixth, William Bourgne driver, Jeremiah W. Lynch mechanician. The larger Knox, with Charles Basle at the wheel and accompanied by Edward A. Burns, was No. 7. Last was the six-cylinder Berliet driven by H. F. Grant, with Frank H. Lee as mechanician.

How the Contestants Got Away at the Start.

It was 9:55 when the Simplex engine was started and she swung into position for the start. There was lacking much of the spectacular effect of the start of a Vanderbilt Cup race; there was no weak morning light, only the full sunlight. But to the spectators who had had good breakfasts the change was agreeable. Minute by minute slipped by, and at exactly 10 o'clock Starter Wagner gave the word and the big grey Simplex was on its journey.

In regular order at one-minute intervals the Fiat, Isotta, Buick, two Knoxes, and Berliet followed up the broad boulevard. Time was allowed for No. 5, so there was a two-minute interval between the Buick and the first Knox. All got away in first-class shape. Except the Berliet, each car had a bonnet. There was an interval of a few minutes, then came the familiar cry, "Car coming! Car coming!" the bugle blew, and at 10:12 the Simplex flashed by, having made the first round in 12:21, or better than 50 miles an hour. The Fiat was close behind, passing 10:12:23, making the round in 11:43. The Isotta had gained a little and was working well when Strang flew by in third place, making the circuit in 11:42. The Buick completed the round in 13:33 and the No. 6 Knox in 14:06. The No. 7 Knox broke down at the upper turn and was delayed several minutes, being passed by the Berliet, which also stopped a little further on. The Simplex, Fiat and Isotta passed the Knox and Berliet, the Simplex finishing the second round at 10:24:35. Its elapsed time for 21.2 miles was 24:35. The Fiat's time was 23:45, and the Isotta's 23:25. This put the Strang Isotta in the lead on time. The Buick completed the second round just after 10:30 o'clock, its elapsed time being 25:26. The No. 6 Knox made the second round in 26:20. The No. 7 Knox completed the first round at 10:33:57, but was not running well.

Going the third round, Strang passed Lescault and Robertson and took the lead. With great applause Strang went by at 10:36:25, his elapsed time for 31.8 miles being 34:25. The Sim-

plex passed at 10:36:50, its elapsed time being 36:60. The Fiat stopped just beyond the upper turn, and was passed on the back stretch by the Buick, its time for three rounds being 38:40.

The Berliet finished its first round at 10:43:25. The No. 6 Knox made the three rounds in 41:28. The Isotta, with a lap to the good over the Fiat, finished the fourth round, completing 42.4 miles at 10:48:28. The Simplex finished four rounds at 10:48:56. Strang had gained three seconds over his nearest opponent in this round and his car was running fine. The No. 7 Knox finished three rounds at 10:51:18, its elapsed time being 45:18. The Buick, in third place, finished four rounds at 10:53:32. The Berliet completed two rounds at 10:55:15, and the No. 6 Knox four rounds at 10:58:41.

Stirring Finishes in the Early Rounds of the Race.

Robertson had his Fiat going again, and started to make up the handicap he was under. At 11:00:06 he finished the third lap. The Simplex, finishing the fifth round of 53 miles, was close behind, having passed the Isotta. The Simplex elapsed time was 1:01:06. The Isotta's time for five rounds was 59:06. The Buick passed at 11:05:21. Robertson had more trouble, but was delayed only briefly. The Berliet had lost a tire and passed with the off rear tire gone at 11:09:08. The Fiat finished three rounds in 1:08:23. The Isotta finished six rounds—63.6 miles, or one-fourth of the race—at 11:11:59. The Simplex finished six rounds at 11:13:18. The Isotta made 53 miles in the first hour, and was still in the lead. The Buick finished six rounds in 1:59:49, and the Fiat four rounds in 1:10:56. With the race one-quarter finished, the Isotta led, the Simplex was second, and the Buick third. The fastest lap was 10:53, made by the Isotta in the sixth round.

Driving in his best style and with his car running like a clock, Strang made seven rounds (74.2 miles) in 1:21:48. The Simplex made seven laps in 1:28:53, having lost time to the Isotta. The Buick went up into second place in the seventh lap, its elapsed time being 1:27:27. The Fiat came along on its fifth lap at 11:33:05, being more than two laps behind the leaders. The Isotta finishing eight laps (84.8 miles) and the No. 7 Knox finishing four laps came close together. Strang's elapsed time was 1:33:28. Lescault, with the Simplex, passed at 11:40:55 and Burman's Buick at 11:42:27. Grant, having changed tires, got going again, and at 11:42:40 completed four rounds. The

Fiat came close behind, finishing six laps, and the No. 6 Knox was near it, finishing five laps. Strang finished the 95.4 miles of nine laps at 11:46:45, his elapsed time being 1:44:45. The Buick was six minutes behind, and the Simplex two minutes behind the Buick.

Strang Steadily Increased His Lead as Race Progressed.

With a lead of 5 minutes and 19 seconds, the Isotta began the eleventh lap, having made 10.6 miles in 116 min. 35 sec. The Simplex made the distance in 124 min. 56 sec., and the Buick in 122 min. 32 sec. These three cars had about 30 miles lead over the Fiat, which was fourth. At 12:05:55, when the Berliet passed, all the cars had finished six laps, or a quarter of the race. The order was: Isotta, Simplex, Buick, Fiat, No. 6 Knox, No. 7 Knox, and Berliet.

At 12:10:09 Strang finished the eleventh round (116.6 miles). His elapsed time was 2:08:09. The Buick's time was 2:14:17, and the Simplex's 2:16:54. Strang finished half the race (12 laps—127.2 miles) in 2:20:22, or 140 min. 22 sec. The Simplex got a flat tire and stopped to change just in front of the grandstand, giving the crowd a welcome diversion. The Buick passed with the rear wheel wobbling badly. The Simplex's time for twelve rounds was 2:28:52, the Buick's 2:26:53. The Fiat had tire trouble and was delayed for a long time, and the race seemed to lie easily in Strang's hands, as he was gaining every lap. He finished thirteen rounds in 2:31:46, at 12:33:46 o'clock. The two Knox cars and the Fiat were in the ninth lap and the Berliet in the eighth. The No. 6 Knox had crawled up into fourth place and the Berliet into the fifth, the Fiat dropping to sixth. In the fourteenth round Strang lapped the Buick and the Simplex. His time for fourteen rounds (148.4 miles) was 2:44:12. The Buick had trouble, and the Simplex went up to second place, completing thirteen rounds in 2:48:59. The Berliet made nine laps in 2:42:44 and the Fiat the same distance in 2:49:33.

At 12:58:06 Strang's Isotta flew by, ending its fifteenth round. Its elapsed time was 2:56:06. Lescault's Simplex made fourteen rounds in 3:04:08, the No. 6 Knox eleven rounds in 2:55:24, the Fiat ten rounds in 3:02:01, and the Berliet ten rounds in 2:54:21. At 1:09:10, the Buick having made repairs, completed the thirteenth round, its elapsed time being 3:06:10. Strang finished his sixteenth round (169.6 miles) in 3:07:58. The No.

6 Knox finished its twelfth round in 3:07:48. The Simplex completed fifteen rounds in 3:16:11 and was running strongly. Strang dashed by the stand and began his eighteenth lap, having made 180.2 miles in 3:19:37.

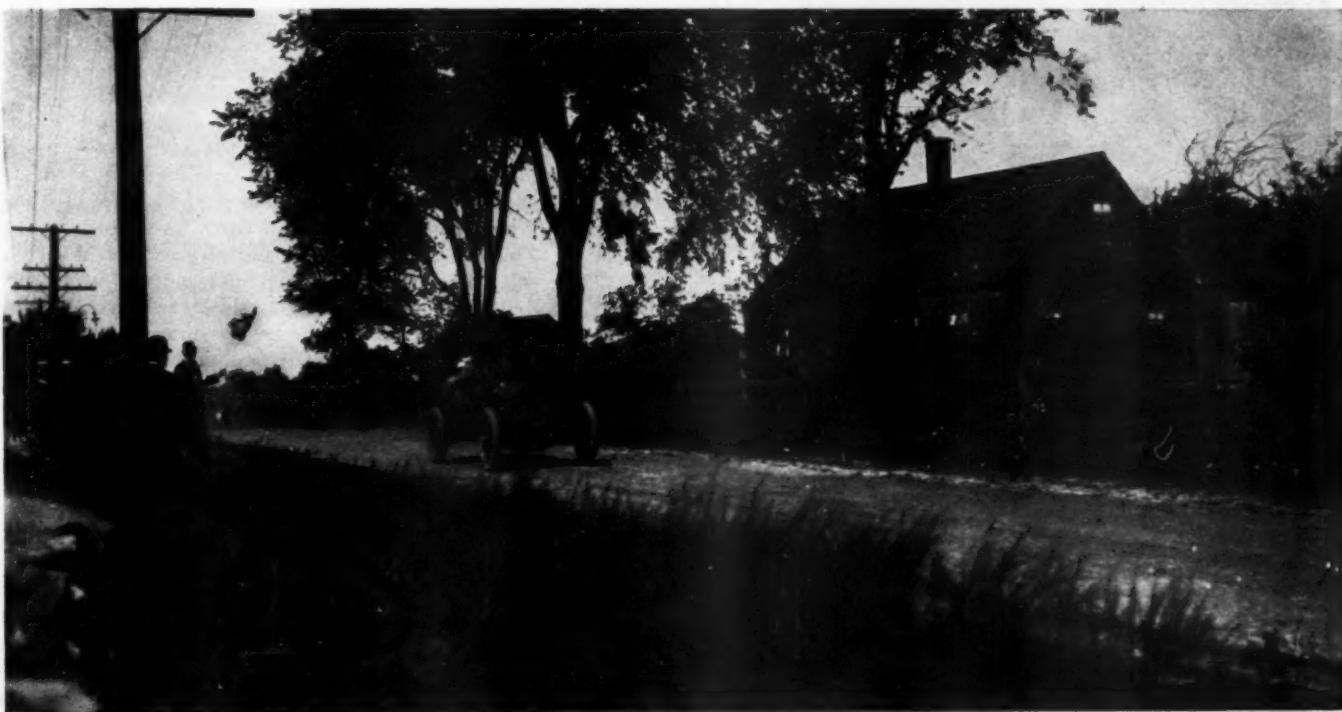
Just before 1:30 o'clock the first real brush of the race visible at the grandstand occurred. Lescault's Simplex and Robertson's Fiat came tearing up the broad boulevard side by side. They were almost neck and neck, but Lescault had speed in reserve, and passed his opponent in front of the stand. The Simplex finished sixteen rounds in 3:28:11 and the Fiat twelve rounds in 3:27:10. The Buick made fifteen rounds in 3:29:35.

Strang finished eighteen rounds, three-quarters of the race, covering 190.8 miles in 3:31:16. His machine was running beautifully, and he had two laps on the Simplex and three on the Buick.

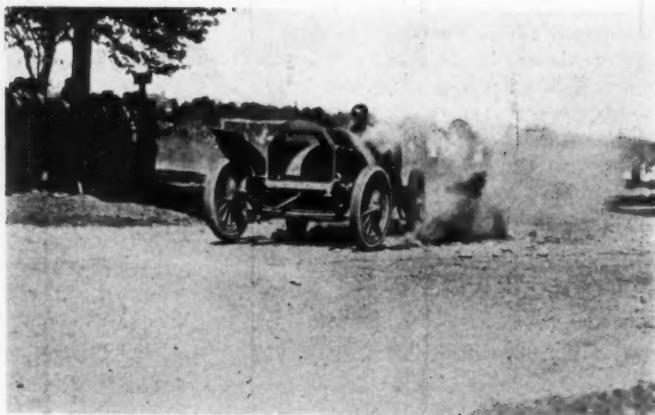
Excitement Ran High as Race Neared the Finish.

In making the seventeenth round the Simplex had pulled away from the Fiat and led him by several hundred yards when they again went by the tape. The Simplex's time for 180.2 miles was 3:40:19; that of the Fiat for 137.8 miles was 3:40:59. Strang finished nineteen rounds, making 201.4 miles, in 3:42:43. The Buick was just ahead, completing its sixteenth round. Strang had averaged nearly 55 miles an hour from the start. There was a pretty race up the stretch when Strang finished the twentieth lap, closely pursued by the Buick finishing its seventeenth lap. The little Buick had become a favorite, and the crowd gave Burman a cheer as he went by in the Isotta's dust.

The Fiat finished fourteen rounds in 3:52:55. The Isotta finished twenty laps (212 miles) in 3:54:05. In the fifteenth lap Robertson drove hard and nearly caught Lescault, but he failed to do so, his motor not working first-class. They went up the stretch neck and neck, and Strang was close behind in his twenty-first lap. The Simplex passed at 2:06:54 o'clock, the Fiat at 2:07:01, and the Isotta at 2:07:50. Soon after passing the grandstand the Simplex blew a cylinder. The Buick finished eighteen laps at 2:09:34, its elapsed time being 4:06:34. The Berliet, having more tire trouble, passed at the end of the fifteenth round and threw a forward shoe. It scattered the crowd and the police, but one small boy was so unfortunate as to be hit. He was not hurt. The Berliet and the Fiat were especially sufferers from tire trouble. At 2:19:33 Strang again



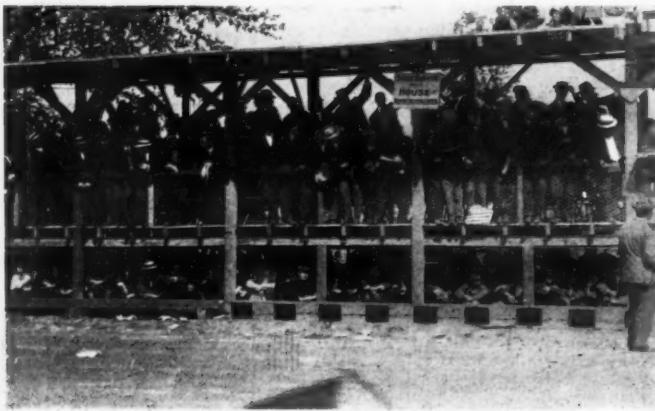
Simplex Which Showed Great Speed Up to the Time of the Mishap Which Took It Out of the Race.



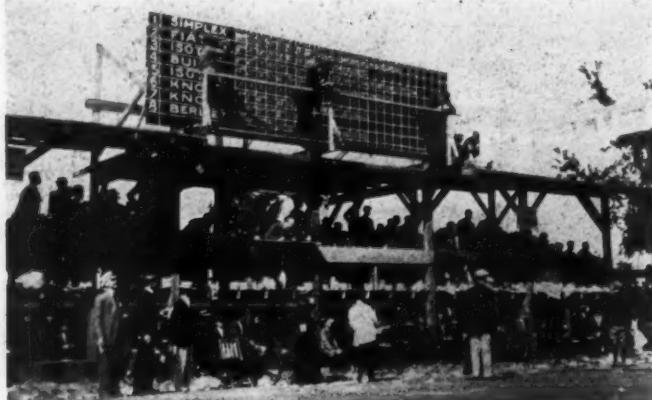
Basie and the Knox Which Was Unlucky.



President John O. Heinze of the Lowell Club.



Stand Provided for the Massachusetts Legislators.



Where the Scorers and the Press Men Held Forth.

tore by the tape, making twenty-two laps (233.2 miles) in 4:17:33, and, as it seemed, only a few minutes later he rushed into the stretch again, and Fred Wagner gave him the green flag sign that he was beginning the last lap. His elapsed time for twenty-three laps (243.8 miles) was 4:30:49. Though he had the race practically won, Strang did not let up his pace, and at 2:44:34 he finished a winner, but on a flat tire. His elapsed time was 4:42:34. Strang was given a fine round of applause as he finished.

Four cars were to finish, and the crowd was remarkably patient in remaining in place, the course being kept clear for the remaining cars. The Simplex was out with a broken cylinder, and the No. 7 Knox had withdrawn, losing a wheel in the eighth lap, leaving only the Fiat, Buick, No. 6 Knox, and the Berliet to fight it out. A protest was filed against the Buick by entrants of the Fiat, Knox, and Berliet, claiming that it was repaired with outside help, the radiator being changed. The protest was taken under advisement, and later allowed by the judges.

Interesting Features of the Finishing Laps.

When Strang finished the Fiat and Berliet were in the eighteenth lap, the Knox in the nineteenth, and the Buick in the twenty-first. The Buick was disqualified because of infraction of the rules in having outside assistance in making repairs. Burman was flagged when he finished the twenty-first round, and all time after the twelfth was thrown out. This put the Berliet second, the No. 6 Knox third, and the Fiat fourth at the beginning of the twentieth lap. The Berliet finished the twentieth lap in 5:18:14, the Knox in 5:23:28, and the Fiat in 5:29:19. In the next lap the Berliet gained a little on the Knox. The Berliet's elapsed time was 5:30:31, and the Knox's 5:30:54. The Knox in turn increased its lead on the Fiat, the Fiat's elapsed time being 5:43:10. The Berliet covered twenty-two laps in 5:42:57, not only holding its position, but gaining on the Knox, the elapsed time of which was 5:57:07. The Fiat had picked up a little, and its elapsed time was 6:01:48. The Berliet was running smoothly as it entered the final lap and on the upper part of the course lapped both the Knox and the Fiat. Its elapsed time for twenty-three rounds was 5:56:11. In the back-stretch the Berliet had trouble and was passed by the Knox and the Fiat. The Berliet, however, was only temporarily delayed, and soon was going again.

At 4:21:58 the 60-horsepower Berliet flashed by, finishing the race in second place. Its elapsed time was 6:14:58. The Berliet had done excellent work against odds, and Grant had driven a heady race. The Knox led the Fiat by about two minutes at the beginning of the last lap. They made a great duel of it all the way around, and they swung into the stretch close together, the Knox having a little the better of it. There was a spirited tussle up the boulevard, but the Knox held its lead and finished in third place, its elapsed time being 6:33:29. The Fiat was fourth, finishing with a flat forward tire. Its elapsed time was 6:38:32. This ended Lowell's first and very successful race.

This evening President John O. Heinze and the other officers of the Lowell Automobile Club entertained the drivers, mechanicians, and officials at a complimentary dinner at the Vesper Country Club, at which the trophy was presented. The Merrimac Valley course was duly boomed as the scene of future important road races, including the 1909 Grand Prix.

MORRIS PARK AS AN AIRSHIP TRACK.

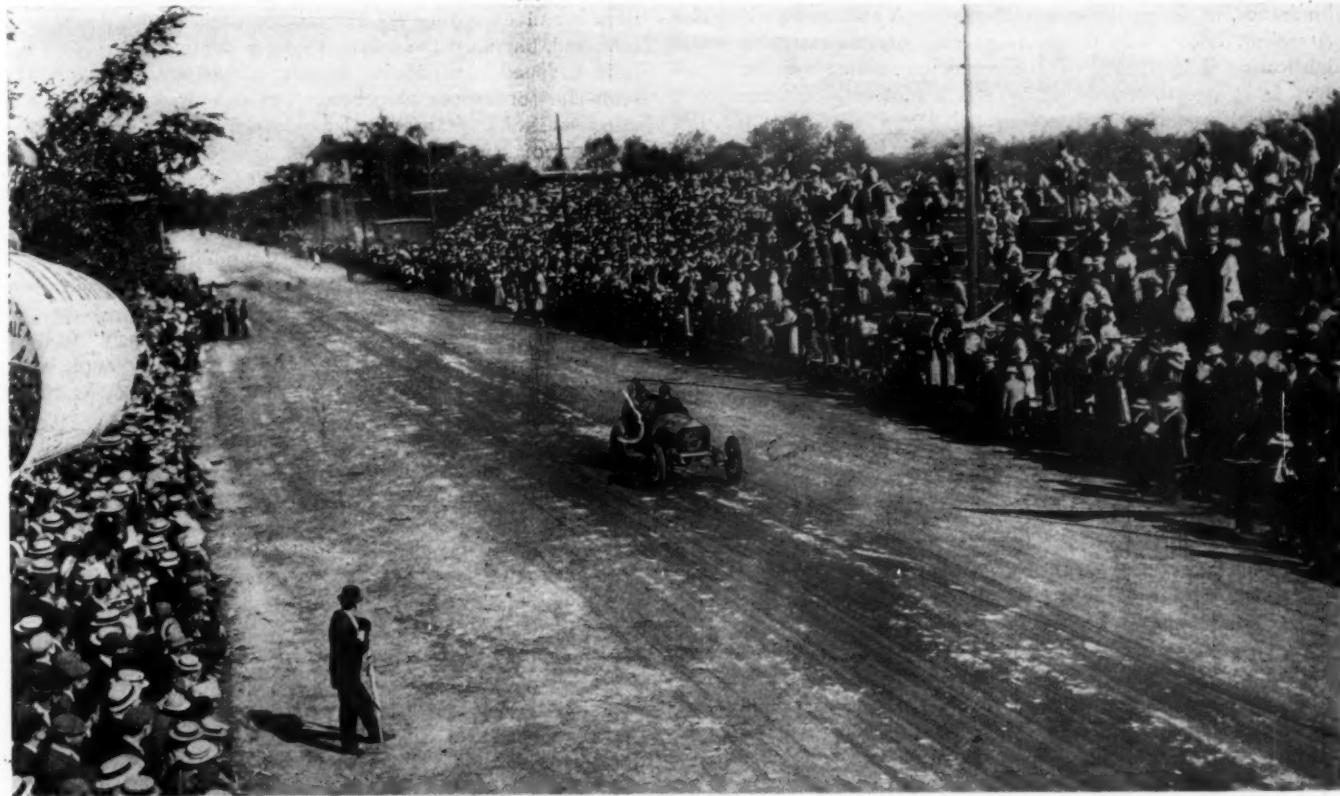
The Morris Park race track, in New York City, once the scene of automobile record-breaking, will now be devoted to similar attempts by flying machines. The recently formed Aero-nautic Society has secured the use of the track for the use of its members, together with the grandstand and outbuildings, which will provide ample storage room. On Labor Day Wilbur R. Kimball, vice-president of the society, gave his helicopter an outing on the grounds. The machine was rolled around for inspection and its motor was run for a while, but no attempt was made to send it into the air.

TABULAR STORY OF THE LOWELL, MASS., 254.4 MILES ROAD RACE, SEPT. 7, 1908.

No.	CRR	H.P.	Driver	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Lap 6	Lap 7	Lap 8	Lap 9	Lap 10	Lap 11	Lap 12
3	ISOTTA	65	Strang	10.6m	21.2m	31.8m	42.4m	53m	63.6m	74.2m	84.8m	95.4m	106m	116.6m	127.2m
8	BERLIET	60	Grant	11:42	23:25	34.25	46:28	59:06	1:09:59	1:21:48	1:33:28	1:44:45	1:56:35	2:08:09	2:20:22
6	KNOX	40	Bourque	36:25	48:15	1:02:08	1:35:40	1:47:24	1:58:55	2:19:30	2:31	2:42:44	2:54:21	3:06:48	3:18:05
2	FIAT	60	Robertson	14:06	26:20	41:28	53:41	1:40:40	1:52:54	2:05:17	2:18:01	2:30:35	2:42:59	2:55:24	3:07:48
4	BUICK	40	Burman	13:33	25:26	38:40	50:32	1:02:21	1:15:49	1:27:27	1:39:07	1:50:44	2:02:32	2:14:17	2:26:53
1	SIMPLEX	60	Lescault	12:21	24:35	36:50	48:56	1:01:06	1:13:18	1:28:53	1:40:55	1:52:56	2:04:56	2:16:54	2:28:52
7	KNOX	50	Basle	27:57	45:18	1:06:31	1:24:28	1:41:19	1:53:11	2:04:51	Broke a wheel.				
5	ISOTTA	65	Poole	Did not start.											
No.	CAR	H.P.	Driver	Lap 13	Lap 14	Lap 15	Lap 16	Lap 17	Lap 18	Lap 19	Lap 20	Lap 21	Lap 22	Lap 23	Lap 24
3	ISOTTA	65	Strang	137.8m	148.4m	159m	169.6m	180.2m	190.8m	201.4m	212m	222.6m	233.2m	243.8m	254.4m
8	BERLIET	60	Grant	2:31:46	2:44:12	2:56:06	3:07:58	3:19:37	3:31:16	3:42:43	3:54:05	4:05:50	4:17:33	4:30:49	4:42:34
6	KNOX	40	Bourque	3:40:45	3:52:54	4:09:18	4:28:04	4:40:47	4:53:25	5:05:49	5:18:14	5:30:31	5:42:57	5:56:11	6:14:58
2	FIAT	60	Robertson	3:26:35	3:43:48	4:10:41	4:23:50	4:37:12	4:50:15	5:10:50	5:23:28	5:36:54	5:57:07	6:16:46	6:33:29
4	BUICK	40	Burman	3:40:59	3:52:55	4:06:01	4:28:25	4:40:48	5:00:57	5:15:50	5:29:19	5:43:10	6:01:48	6:18:57	6:38:32
1	SIMPLEX	60	Lescault	3:06:10	3:17:50	3:29:35	3:41:25	3:53:07	4:06:34	4:22:15	4:41:04	Disqualified on 12th lap.			
TEN FASTEST LAPS															
6th	Strang			10:53 (58.3 m.p.h.)											
3rd	Strang			11:00 (57.8 m.p.h.)											
9th	Strang			11:17 (56.3 m.p.h.)											
12th	Grant			11:17 (56.3 m.p.h.)											
6th	Grant			11:21 (56.0 m.p.h.)											
20th	Strang			11:22 (56.0 m.p.h.)											
2nd	Strang			11:23 (55.9 m.p.h.)											
11th	Strang			11:24 (55.8 m.p.h.)											
13th	Strang			11:24 (55.8 m.p.h.)											
19th	Strang			11:27 (55.5 m.p.h.)											

AVERAGE TIME, MILES PER HOUR AND FASTEST LAPS

Strang—Isotta	54.0 m.p.h.
Grant—Berliet	40.7 m.p.h.
Bourque—Knox	38.8 m.p.h.
Robertson—Fiat	38.4 m.p.h.
Bourque's fastest lap.	4th, in 12:13 (52.1 m.p.h.)
Robertson's fastest lap.	4th, in 11:34 (54.8 m.p.h.)
Burman's fastest lap.	9th, in 11:37 (54.8 m.p.h.)
Lescault's fastest lap.	11th, in 11:58 (53.0 m.p.h.)
Basle's fastest lap.	12th, in 11:40 (54.4 m.p.h.)
	7th, in 11:40 (54.4 m.p.h.)



No. 6 Knox Passing the Big Grand Stand, Where the Excellent Arrangements for Spectators Were Plainly Apparent.

HOW THEY WERE MECHANICALLY CONSTITUTED

By CHARLES B. HAYWARD.

LOWELL, MASS., Sept. 7.—Strang's *Isotta* three-time winner, which he drove to victory to-day with the same clock-like regularity that distinguished his performances earlier in the year at Savannah and Briarcliff, has been in the limelight so much during the past half year that its mechanical details are more or less a matter of common knowledge. It has a four-cylinder vertical engine, the metric dimensions of which are the equivalent of 57.8 bore by 51.2 stroke, thus making it a high-speed motor, while it is rated at 60-horsepower, though, needless to add, it is capable of an output considerably in excess of this figure. An Eisemann magneto is the sole provision for ignition, lubrication being effected by the exhaust pressure, a 12-gallon tank of lubricating oil being carried between the fuel supply tank and the driver's seat. A carburetor of special *Isotta* design, which, however, does not differ radically from accepted standards, a centrifugal pump and honeycomb radiator complete the

motor details. Transmission is through a four-speed sliding gear of the selective type to double side chains, the gear ratio being 2 to 1, which accounts in part for the excellent speed performance of the car as some of the others were geared lower. The wheel base is 122 inches and the tire equipment is Michelin on dismountable rims of the same make. Throughout the 250-mile swing-round the endless turns of the 10-mile circuit, Strang never lost a moment through mechanical trouble, while the goddess of tire fates was equally amiable, his only Michelin mishap being a puncture on which he finished as fast as if all four were still good.

Berliet No. 8, which sprung the surprise of the day by finishing second, after having had endless tire trouble, was the only representative of the six-cylinder type entered. Its six cylinders are cast in pairs and measure 4 3/4 by 5 inches, giving it a rating of 60-horsepower, which is conservative, to judge from its speed



The Buick, Which Met with Disqualification.

abilities. It was one of the two longest cars in the contest, and its wheelbase of 126 inches proved an advantage, rather than a hindrance, in taking the numerous turns. A carburetor of special American Locomotive design takes care of this essential, while lubrication is by means of a constant circulating system. Fuel feed is by pressure, ignition by Bosch high-tension magneto, a honeycomb radiator and centrifugal pump providing for the cooling. A four-speed selectively operated gear set and side chains complete the transmission. Diamonds on Continental dismountable rims form the tire equipment.

Knox team, Nos. 6 and 7, were extremely businesslike, the smaller showing its mettle by finishing third. No. 6 was the small Knox, having a four-cylinder engine measuring 47-8 by 43-4 inches and rated at 40-horsepower, its wheelbase of 102 inches making it the smallest car entered. The motor is of the new water-cooled valves-in-the-head type of Knox for 1909, and is lubricated by a special oil circulating system. A Splitdorf magneto, supplemented by a set of accumulators and four-unit Splitdorf coil provided for the ignition. The tire equipment consisted of Fisk on the Fisk dismountable rims. With the exception of its difference in size and its side chain drive, the same description applies to a great extent to the No. 7 Knox, the motor dimensions of which are 51-2 by 51-2 inches, while its rating is 60-horsepower. Its wheelbase is 106 inches and it also had Fisk tire equipment. Both were fitted with special shock absorbers.

Simplex No. 1, which was a sure second up to within two or three of the short laps of the finish, when, according to report, it cracked a cylinder and had to retire, is a 50-horsepower four-cylinder machine which distinguished itself at the Briarcliff last Spring. Its cylinder dimensions are 53-4 inches "square" and its motor turns over at a rate, which, with the car's high gear ratio, made it pass the stand on the boulevard straightaway at a pace that made Lescault an equal favorite with Strang from



The Butler Ames Trophy and Its Donor.

the spectacular point of view. It was one of the longest cars competing, its wheelbase of 126 inches being the same as the Berliet and exceeding the closest approach to this by almost a foot, and, like most of the others, its semi-elliptic springs were carefully wrapped. In addition to this, it was equipped with Trufault-Hartford shock absorbers. Drive is through a four-speed selective sliding gear set to double chains. Its tire equipment consisted of Michelin on Michelin dismountable rims.

Of the seven contestants which lined up this morning, the No. 2 **Fiat** is the only one having low-tension ignition, a Bosch magneto being used. It is a 60-horsepower, four-cylinder machine, its dimensions being 140 by 135 millimeters, and, like the Isotta, having a bore exceeding the length of its stroke, which accounts for its speed of 1,400 to 1,500 r.p.m. Contrary to expectation, its performance was a disappointment from the first, and its motor troubles, apparent early in the race, became more pronounced toward the end, when it seemed to be running on three cylinders only. Like both the Simplex and Isotta its transmission consists of a four-speed selective gear and side chain drive. It was equipped with Continental tires and the Continental ready-inflated replacements.

The performance of the little **Buick** No. 4 proved a veritable surprise. With its 45-8 by 5 inch four-cylinder motor, rated at 40-horsepower, it maintained a speed and regularity of running that was amazing. For ignition, a Remy magneto was employed, supplemented by a set of Duro accumulators and Connecticut coils. It was geared at 21-2 to 1 and was one of the two shaft-driven cars in the race. Before the latter was half over, however, it showed signs of giving way under the strain. Its radiator bearing No. 4 was replaced by a new one and there were signs of rear axle trouble which gradually became worse and eventually prevented a successful termination of what was a most creditable showing. However, it was disqualified by the referee for receiving assistance on the twelfth lap.



Fiat "60," Which Finished in Fourth Place.



Four Notables—Owen, Wagner, Fortescue, Speare.

WILDWOOD HAS GOOD SPORT WITH ELEVENTH-HOUR FIELD

WILDWOOD-BY-THE-SEA, N. J., Sept. 7.—Steam triumphed over gasoline in the three principal events of the closing meet of the Motor Club of Wildwood over the mile course on the Central avenue boulevard, the Stanley steamer driven by D. Walter Harper flashing over the tape by a comfortable margin in each instance. But the field was not a representative one by any means, from the gasoline standpoint, the Parkin and the Sharp-Arrow, both comparative newcomers in the racing field, being the only cars to approach the steamer's time.

Indeed, there was a woeful dearth of cars of all kinds. So scarce were they, indeed, that the committee in charge had not a sufficient number of entries this morning to warrant the publication of a program, and had it not been for a number of Philadelphia visitors who post-entered their cars, it is quite likely that there would have been no races. Arthur Hammerstein, a relative of the celebrated impresario, entered his Mercedes as a stop-gap; John Wilkinson did likewise with his Packard, and young John Wanamaker, Jr., with a car of similar make. And they entered almost every event, too; otherwise the entire program would have been a series of triangular duels between the Stanley, Parkin, and Sharp-Arrow cars, the only ones that were stripped for the fray.

W. Wayne Davis, the starter, helped out the program by putting in a special match race of Mathesons, and the Stanley contingent did likewise with a trio of steam runabouts belonging to visitors.

And yet the sport was well worth while. The course was never in better shape, the weather was excellent, and the crowd enormous. After the Stanley had annexed the flying start free-for-all, the committee repeated with a standing start with the same field—that helped some, too.

The real battle of the day came in the mile time trials, the winner of which annexed the choicest bit of plunder ever hung up in these parts—a building lot worth \$1,000 at Wildwood Crest. Hammerstein and his Mercedes led off with a modest 1:06 3-5, and then Harper cinched things with a :47 2-5 trip (course record, :42 3-5, held by Schill's 120-horsepower Fiat). That was fast enough to hold the others safe, for the Sharp-Arrow could do no better than :51 1-5, the Parkin :51 3-5, and the Wilkinson Packard :57 2-5.

It was the same story in the kilometer time trials. The Mercedes again led off—time :41 flat. Frank Yerger drove his "army dispatch" Studebaker over the distance in :41 2-5. Then Harper again choked off all opposition with a Stanley trip in :29 1-5, although Joe Parkin came near his time with a dash in an even half minute.

One of the most exciting races of the day was a handicap for touring cars, the marks being calculated from the performances of the cars in the previous events—a special ruling calling for the disqualification of any car that did the mile more than five seconds faster than its previous best time. Arthur Hammerstein's Mercedes was the long-mark car, and the 19 seconds' start proved too much for the Stanley (scratch) to overcome, the steamer finishing a bad third.

The prizes were distributed on the boardwalk by the Mayor in the evening, and what looked like a rank fiasco early in the morning was voted a good day's sport by the spectators. The summary:

MATCH RACE, MATHESON TOURING CARS.

1. Matheson	Willie Houpt.....	1:22
2. Matheson	Frank Yerger.....	1:27
3. Matheson	Louis Taubel.....	

FREE-FOR-ALL (Flying Start).

1. Stanley	D. Walter Harper.....	:55 2-5
2. Parkin	Joe Parkin, Jr.....	:58
3. Sharp-Arrow	Wm. Sharp.....	:59
4. Packard	John Wilkinson.....	
5. Studebaker	Frank Yerger.....	
6. Mercedes	Arthur Hammerstein.....	

FREE-FOR-ALL (Standing Start).

1. Sharp-Arrow	Wm. Sharp.....	1:04
2. Parkin	Joe Parkin, Jr.....	1:04 3-5
3. Studebaker	Frank Yerger.....	
4. Mercedes	Arthur Hammerstein.....	

MATCH RACE, STANLEY RUNABOUTS.

1. Stanley	Frank Dorrell.....	1:25 2-5
2. Stanley	D. H. Clayton.....	1:27 2-5
3. Stanley	Wm. Lippman.....	

SPECIAL MATCH RACE, TOURING CARS (Owners Driving).

1. Packard	John Wanamaker, Jr.....	1:03 3-5
2. Pierce-Arrow	John J. Coyle.....	1:19
3. Peerless	Arthur Hammerstein.....	

GASOLINE STOCK TOURING CARS, ANY PRICE AND POWER (Handicap).

1. Mercedes (19 sec.)	Arthur Hammerstein.....	1:18
2. Parkin (4 sec.)	Joe Parkin, Jr.....	1:21 1-5
3. Stanley (scratch.)	D. Walter Harper.....	
4. Sharp-Arrow (4 sec.)	Wm. Sharp.....	
5. Studebaker (18 sec.)	Frank Yerger.....	
6. Packard (10 sec.)	John Wilkinson.....	

MILE TIME TRIALS (For \$1,000 Lot).

1. Stanley	D. Walter Harper.....	:47 2-5
2. Sharp-Arrow	Wm. Sharp.....	:51 1-5
3. Parkin	Joe Parkin, Jr.....	:51 3-5
4. Packard	John Wilkinson.....	:57 2-5
5. Studebaker	Frank Yerger.....	1:05 3-5
6. Mercedes	Arthur Hammerstein.....	1:06 3-5

KILOMETER TIME TRIALS.

1. Stanley	D. Walter Harper.....	:29 1-5
2. Parkin	Joe Parkin, Jr.....	:30
3. Mercedes	Arthur Hammerstein	:41
4. Studebaker	Frank Yerger	:41 1-5

TRACY FINDS PARKWAY GOOD FOR 90 MILES AN HOUR

THAT the cement stretch now in course of construction as a part of the Vanderbilt Cup race course has speed capabilities of 90 miles an hour was convincingly proved by Joseph Tracy in a series of sprints over it last Friday. The car used for the test was the Locomobile in which Mr. Tracy made the fastest lap in the Vanderbilt contest in 1906. Timed by Charles J. Dieges and H. O. von Schuckman, recognized sprint clocking experts, half-miles were negotiated in 23 and 24 seconds and quarter-miles in 11 and 10 4-5 seconds. The latter shows a rate of approximately 90 miles an hour.

Mr. Tracy was enthusiastic over the cement section of the course, 8 miles of the total 11 miles which have practically been completed. He thinks the curves well banked and capable of negotiation at a mile a minute, though the engineers have calculated only upon 40 miles an hour.

As a racing veteran, Mr. Tracy's opinion of the new speed stretch is valuable. He also had some interesting comments to

make. "The cement highway makes an excellent racing road," said he, because it is absolutely dustless, and on account of the grayish color it does not blind the drivers even in the glaring sun, and is very easy to follow even at top speed. There are new sensations also in driving over the cement highway which one does not meet on the ordinary State or country road. There is quite as much bouncing and swaying of the car as you find on the dirt road—possibly a little more—but there is not the slightest tendency to skid, even on the turns, which are only banked, the engineers tell me, for a speed of 40 miles an hour. I took several of those turns which have been completed at the rate of 60 miles an hour, and found the banking ample. Over the straight stretches I think I broke my best record in the last Vanderbilt race. That was about 106 miles an hour for a quarter of a mile stretch, which we measured off near our racing headquarters at Lakeville."

It is not improbable that Mr. Tracy will drive in the Vanderbilt.

LATEST NEWS ABOUT RACE FOR THE VANDERBILT CUP

PRESENT indications are that the 1908 Vanderbilt Cup race, scheduled for October 24, on Long Island, will have a preponderance of American participants, with the foreign element secondary in importance. The latest information available indicates that a considerable number of American makers will make entries in the near future, while others may hold back until the actual closing of the list on October 1.

William K. Vanderbilt, Jr., donor of the famous cup, returned from Europe on Tuesday last, following which there were several conferences and a meeting of the cup commission yesterday afternoon. The whole situation was carefully canvassed, and there is no question about the holding of the race, providing the American manufacturers immediately come forward with the requisite number of entries—a situation which seems to be assured beyond question.

One Thomas racing car was entered this week, and it is anticipated that a second Thomas car will also be named very shortly. Locomobile, Pennsylvania, Roebling, Pope-Hartford, Frayer-Miller and Chalmers-Detroit are among the other probable sources of early candidates. Outside of a couple of firms, it is an admitted fact that the foreign makers have lost interest in American racing, coincident with the fact that the American market is no longer a remunerative one, except for a couple of makes.

Since the first announcement of the Vanderbilt Cup course there has been a noteworthy change in the course. At the western end the cars will turn off from the Jericho road into the Old Westbury road, and travel south in the direction of the cement stretch until they reach the old country road. To connect the latter with the cement stretch the parkway engineers are building a new highway of over a mile in length to connect

the western end of the cement with the southern end of the Old Westbury road, thus doing away with two sharp turns and eliminating Whaleneck avenue.

The engineers have complained that so many automobilists are visiting the parkway as to interfere with the work. Accordingly Chairman Thompson has found it necessary to issue an order against the use of the parkway stretches by visitors until the work is nearer to completion.

Work on the Vanderbilt stretch of the parkway is rapidly nearing completion. About eight miles of the cement roadway in all has been laid, and nearly all of the bridges at intersecting county roads and railroads are ready for the cement workers. These bridges are formed by a solid cement abutment high enough to permit a steam train or a load of loose hay to pass under the new cement parkway. The tops of the abutments are connected by heavy steel girders, such as are used to support the roof of the Manhattan subway, and around these girders a wooden mold is built and the cement and crushed stone are poured in until the desired level is reached, thus making the bridges at all intersecting roads practically solid cement, steel, and stone. The longest bridge is 90 feet. This is the bridge at Central Park, where the highway begins to rise about 600 feet before it reaches the Long Island Railroad tracks. The abutments are about 35 feet high at this point, and the racing cars will pass over railway trains and vehicles which travel along the public highway, so that it will be possible while the race is in progress to run trains on this branch on regular schedule, and none of the country traffic will be interrupted in the least.

The Long Island Railroad has made preparation to lay side tracks from the Hempstead branch into the back of the grandstand to insure convenient service.

DE PALMA NOW HOLDS MILE TRACK RECORD.

MINNEAPOLIS, MINN., Sept. 5.—Walter Christie's world's record of 52 seconds, for a circular track, was lowered a full second to-day, in the speed trials run in connection with the Minnesota State Fair automobile races. Ralph De Palma, driving his Fiat car, put the mark at 51 seconds, and in subsequent attempts to equal the new record, Christie did 52 1-4.

De Palma's performance was so sensational as to arouse the 30,000 spectators who filled the grandstands, bleachers, and paddock, to the highest pitch of enthusiasm. Christie had made the first trial at the record, hitting a mark of 52 1-2, and making a daring circuit of the track. De Palma followed him almost immediately, and the performance of the young driver of Cedrino's 90-horsepower speed car was the acme of daring.

He took the turns with almost no lessening of speed, and did not skid as much as Christie had done. De Palma's burst of speed in the home stretch was hair-raising. His time at the half was 26 flat, and he reduced this by a full second in negotiating the last half of the course. The announcement of the setting of a new record brought forth thundering cheers from the spectators, and Christie was among the first to congratulate the winner.

Christie later made another trial at the record, making a circuit of the track in 52 1-4 seconds. In a match race held after the speed trials, De Palma took two successive heats from Christie, his time being 3:04 and 3:01 4-5.

CLEVELAND RELIABILITY IN NOVEMBER.

CLEVELAND, Sept. 8.—Because of a conflict with the Chicago contest dates, the Cleveland reliability run has been postponed from October 7-9 to October 14-16, with a possibility that it may not be held until the very early part of November.

NAZZARO WINS BOLOGNA RACE WITH FIAT.

BOLOGNA, Sept. 6.—The race for the Florio trophy yesterday was won by Nazzaro and his Fiat, in the time of 4 hours 25 minutes 21 seconds for the 327.6 miles. This is at the rate of 74.3 miles an hour, and is a world's record. Only six out of the seventeen starters finished, in the following order:

Nazzaro, Fiat, Italian.....	4:25:21
Trucco, De Dietrich, French.....	4:34:07
Cagno, Itala, Italian.....	4:56:12
Demogeot, Mors, French.....	4:57:11
Lancia, Fiat, Italian.....	5:08:51
Garcet, Clement, French.....	5:22:07

There were six Italian and eleven French cars in the race; of these, 50 per cent. of the Italians and 27 per cent. of the French cars finished. Mishaps were numerous, but no serious accidents occurred. After the finish Nazzaro declared that this would be his last race, as he is soon to marry a young lady of Turin. The A. C. A. has for some time advertised that Nazzaro was to drive in the Grand Prize race at Savannah, but it looks as if they were due to be disappointed.

QUAKERITES HOPE FOR FAIRMOUNT RACE.

PHILADELPHIA, Sept. 7.—The managers of the proposed 200-mile stock car race, which they hope to make a feature of next month's Founder's Week celebration, will not hear definitely until next Thursday whether or not the use of the already surveyed ten-mile course in Fairmount Park will be granted them. Nevertheless, they are going ahead with many of the preliminaries, just as if the desired permission was a matter of course. The delay has been due to the fact that a majority of the commission has been out of town, and that a quorum will be an impossibility until Thursday next, when the appeal of the Quaker City Motor Club will come up for action.

SUGGESTIONS FOR THE MAN WHO DRIVES HIS CAR

By THOS. J. FAY, E. E., PRESIDENT SOCIETY OF AUTOMOBILE ENGINEERS.

FROM the time a car is delivered (in good working order) into the hands of the purchaser, it is for him to cope with the difficulties that may arise. The extent of his success will depend upon:

- (a) The quality of the car.
- (b) The skill of the user.
- (c) The extent of service.
- (d) The roads traversed.

At all events, the user of a car will oftentimes find himself unable to quickly locate troubles, unless he follows some systematic course, along lines based on "the elimination of the known quantities."

The scheme here given takes into account the various cases likely to arise distinguishing between the "likely known quantities" and the conditions to be surmised, in view of them. No plan can be so complete as to leave nothing to be desired; but this has been devised in a manner general in its scope, and should prove adaptable to nearly all makes of cars.

It is not to be supposed that any one car will develop any considerable number of the troubles suggested. Some of them, however, might arise in connection with any car; and with so many possible troubles, it will prove difficult for the average autoist to quickly locate the trouble to be eradicated, especially under road conditions.

The remedies will, in most cases, suggest themselves. For the more difficult problems, reference must be had to chapters dealing with them. It would detract from the value of this scheme to add anything by way of advice or suggestions of procedure.

CASE NO. 1—THE MOTOR WILL NOT OPERATE.

Known Quantities.

- (a) Ignition is in working order.
- (b) Compression is normal.
- (c) Carbureter is in normal condition.
- (d) Exhaust valves seat properly.
- (e) Inlet valves seat properly.
- (f) Gasoline in the tank.
- (g) No water in the gasoline.
- (h) Gasoline supply valves open.
- (i) Gasoline piping is clear.
- (j) Mixture intake is tight.
- (k) Carbureter control system is not deranged.
- (l) Gasoline "tank pressure" is normal.
- (m) No water in cylinders (due to defective casting).
- (n) Cylinders not flooded with cylinder oil.
- (o) Cylinders not flooded with gasoline.
- (p) Timer is not loose on the shaft.

Unknown Quantities.

(a) Ignition is out of time. This is a condition that could not well obtain in a motor that had been performing in a satisfactory manner, up to the time of failure to operate, unless the gear driving the timer should shift enough to alter the timing. That is, assuming the timer itself is in good working order. It is possible that the brushes of the timer might be loosened in such a way as to alter the timing relation.

(b) The spark might show all the evidences of working, and not work under compression. This could follow a crack in the insulation (porcelain tube) so small as not to be noticed. It might also be due to an excessive spark gap; it must be remembered that a spark in the open air is not positive proof of a spark under compression in the cylinder of a motor. The higher the compression, the higher the resistance of the spark gap.

(c) If the car comes from the repair shop and fails to work satisfactorily, provided all the known quantities of Case No. 1

are as stated, it may be taken for granted that the timing gears were not put back with the teeth meshing in the manner to set the timer in the right relation for timing the spark. In such a case, it will be necessary to locate the teeth that should mesh for correct timing and shift the gear relative to the pinion in such a way as to correct the error.

(d) It is possible to experience trouble as a result of infected grease in the timer. Anything that would materially lower the resistance of the grease, as particles of metal, carbon or other conducting media, would tend to cause trouble.

(e) If the wiring is in bad shape, it will be possible to note a spark in the open air that might be very feeble or intermittent under compression, since it might be the case that the leakage across the wiring system would manifest itself with the compression and not show up with the spark gap in air.

(f) Carbureter troubles may be distinguished from ignition troubles by making an artificial mixture in the cylinders. Crank with the vents open until enough fresh air has been passed through the cylinders to assure complete scavenging; then by priming through the vents and turning the engine over with the ignition switched on, it will be possible to note if the spark and timing are truly in working order. If the cylinders fire with the priming, the carbureter wants adjusting in some way or other.

(g) If a car has been working, and after repairing, fails to work in the usual manner, assuming all the known quantities are as before stated, and the timer is in the correct relation and in good working order, it is probable that the camshaft has been put back with the teeth of the half time gears out of correct mesh. This will demand that the half-time gears be remeshed, in accord with the requirements.

(h) If a car has been working, and after repairs it fails to come up to the mark, then, provided the timer is properly related and the half time gears of the camshaft show that they are right, as regards meshing, it will be well to note if the cams are keyed on; if they are, and in the act of repairing one or more of them were put back wrong, the result would be undesirable.

(i) If a motor has been provided with a new camshaft, and the known conditions are all as before stated, failure to perform properly will denote that the key-way for the half time gear is not in the right place with respect to the markings on the gear; that is, if the gears show markings for the correct mesh and the same markings were held to in inserting the new camshaft.

CASE NO. 2—THE MOTOR WILL NOT OPERATE.

Known Quantities (involving the carbureter).

- (b) Compression is normal.
- (a) Ignition in working order.
- (c) Exhaust valves seat properly.
- (d) Inlet valves seat properly.
- (e) Gasoline in tank.
- (f) No water in gasoline.
- (g) Gasoline supply valves open.
- (h) Gasoline piping clear.
- (i) Mixture intake tight.
- (j) Carbureter control system is not deranged.
- (k) Gasoline tank pressure is normal.
- (l) No water in cylinders.
- (m) Cylinders free of excess lubricating oil.
- (n) Cylinders free of excess gasoline.
- (o) Camshaft not changed in any way.
- (p) Camshaft half time gears not changed in any way.
- (q) Grease in timer not infected.
- (r) Motor will start after scavenging and priming.

Unknown Quantities.

- (a) Carbureter float punctured? (if of copper).
- (b) Carbureter float "loggy"? (if of cork).
- (c) Gasoline level too low?
- (d) Gasoline level too high?
- (e) Float-bowl valve leaking?
- (f) Nozzle stopped up?
- (g) Nozzle needle valve worn?
- (h) Nozzle needle valve wants adjusting?
- (i) Gasoline strainer clogged?
- (j) Balance levers of float loose or stuck?
- (k) Carbureter passageways clogged?
- (l) Air valves out of adjustment?
- (m) Valve springs weakened?
- (n) Lost motion in valves?
- (o) Valves not free?
- (p) Leaky gasket at carbureter joint?
- (q) Change in specific gravity of gasoline?
- (r) Water in float-bowl?
- (s) Air vent stopped up? (float-bowl).
- (t) Float guide pin damaged?
- (u) Gasoline pocket in the intake?
- (v) Hole in nozzle too small?
- (w) Hole in nozzle too large?
- (x) Defect in hot air piping?
- (y) Initial air opening excessive?

CASE NO. 3—THE MOTOR WILL NOT OPERATE.**Known Quantities (involving the compression).**

- (a) Ignition in working order.
- (b) Carbureter in normal condition.
- (c) Gasoline supply adequate.
- (d) Compression cocks closed.
- (e) Motor cranks free.
- (f) Motor starts with difficulty.
- (g) Weak on the power stroke.
- (h) Power falls off overmuch.

Unknown Quantities.

- (a) Considerable falling off of compression?
- (b) Leaky inlet valves?
- (c) Leaky exhaust valves?
- (d) Worn piston rings?
- (e) Worn cylinders?
- (f) Valve stems deformed?
- (g) Valve stems in tight holes?
- (h) Valve stems gummed up?
- (i) Valve seats pitted?
- (j) Valve springs' temper drawn?
- (k) Valve lift adjustment changed?
- (l) Crack in cylinder?
- (m) Piston rings broken?
- (n) Piston rings in tight slots?
- (o) Piston ring slots all in line?
- (p) Cylinder head covers not tight?
- (q) Crack in piston?
- (r) Spark plugs not screwed in tight?
- (s) Intake stopped up?
- (t) Broken valve stem?

CASE NO. 4—MOTOR WILL NOT OPERATE.**Known Quantities (involving the ignition).**

- (a) Compression is normal.
- (b) Carbureter in normal condition.
- (c) Battery in good order.
- (d) Wiring free from trouble (battery).
- (e) Timer in good order.
- (f) No spark at trembler.

Unknown Quantities (involving the ignition).

- (a) Trembler contacts worn?
- (b) Trembler contacts not stuck?
- (c) Trembler not adjusted properly?

- (d) Leak in primary wiring?
- (e) Primary wiring open circuited?
- (f) Primary coil short circuited?
- (g) Primary electrodes partially short circuited?

CASE NO. 5—MOTOR WILL NOT OPERATE.**Known Quantities (involving the ignition).**

- (a) Compression is normal.
- (b) Carbureter in normal condition.
- (c) Spark at the trembler.
- (d) Battery in good order.
- (e) Timer in good order.
- (f) Primary wiring in good order.
- (g) No ignition.

Unknown Quantities (involving the ignition).

- (a) Secondary wiring short circuited?
- (b) Secondary wiring open circuited?
- (c) Spark plug short circuited?
- (d) Spark gap excessive?
- (e) Secondary coil open?
- (f) Secondary coil short circuited?
- (g) Ground contact not good?
- (h) Trembler sluggish?
- (i) Trembler screw loose?

CASE NO. 6—MOTOR WILL NOT OPERATE.**Known Quantities (involving the battery).**

- (a) Compression is normal.
- (b) Carbureter in normal state.
- (c) Timer in good order.
- (d) Wiring in good order.
- (e) Ground contact of wiring good.
- (f) No spark at the spark plug.
- (g) No spark at the trembler.
- (h) No spark at the timer.
- (i) No spark across the battery (storage) terminals.
- (j) Very old or much used dry battery.

Unknown Quantities (involving the battery).

- (a) Battery dead?
- (b) Storage battery sulphated?
- (c) Storage battery fully discharged?
- (d) Storage battery "mud" in cells?
- (e) Storage battery short circuited?
- (f) Storage battery active material fallen out?
- (g) Storage battery very cold?
- (h) Storage battery electrolyte evaporated?
- (i) Storage battery electrolyte weak?
- (j) Storage battery electrolyte strong?
- (k) Storage battery jar broken?
- (l) Dry cells dried out?
- (m) Dry cells, zinc eaten away?
- (n) Dry cells, chemical dissipated (transformed)?
- (o) Dry cells, contact with terminals not good?
- (p) Primary batteries, run down?
- (q) Primary batteries, "polarized"?
- (r) Primary batteries, elements eaten away?
- (s) Primary batteries, solution neutralized?
- (t) Primary batteries, solution evaporated?
- (u) Primary batteries, jar broken?
- (v) Primary batteries, inter-cell leakage?
- (w) All batteries, local action?
- (x) All batteries, impurities?
- (y) Too small for the work?
- (z) Not enough cells in series (or too many in series)?

[To be Continued.]

Farms in Texas which formerly, in spite of their fertility, were practically worthless on account of their distance from a market, are now being profitably cultivated by the help of an automobile.

A CHAPTER ON MAGNETO CONSTRUCTION

THOUGH the magneto has gradually won such an amount of confidence that the leading automobile manufacturers very generally rely on it alone to supply the indispensable spark, it is not without a slight regret that the automobilist has seen the suppression of the storage battery. It is not because the storage battery was frequently used for continuous running that it is

certain amount of fresh gas remains in the cylinders—by the simple operation of a switch causing a temporary working of the trembler. The new Bosch coil, as illustrated by Figs. 1 and 2, reproduced from *Omnia*, is contained in a cylindrical metal box of only about one-third the size of the usual trembler coil. It comprises the starting apparatus with trembler, a condenser, the coil proper, a commutator, allowing the passage at will from magneto to storage battery.

The metal case *A*, covered by the cap *B*, contains the soft iron core *C* in the form of a double *T* armature, this arrangement allowing of a coil of high efficiency while at the same time of small space and low weight. The winding, says *Omnia*, is identical with that of a Bosch high-tension magneto, the primary consisting of a small number of turns of heavy wire, and the secondary of a large number of turns of fine wire. The starting point of the primary winding is fixed to the core *C* and is thus electrically connected to the case *A*. The end of this winding is connected to the beginning of the secondary winding which forms its direct continuation. A wire connects the united ends of the two windings to one of the connections of the commutator placed in the lower part of the case. This connection should be joined up to the storage battery by a cable. The secondary winding also ends at one of the commutator connections which is linked up with the magneto distributor when ignition is made by storage battery.

The commutator is placed directly under the coil, so that its movable part *D* is attached to the armature core while its fixed part *E* constitutes the base of the box and receives the connections of the exterior wires on its lower face. The connections between the poles and the conducting parts of the rotary plate *E* are assured by four elastic contacts 2, 3, 4, 5, arranged in a circle, and a central contact *s* carrying a fixed pin.

The commutator is operated by means of a switch moving in an opening provided for it in the walls of the case. Starting from the intermediate position, which is zero, ignition would be



Fig. 1.

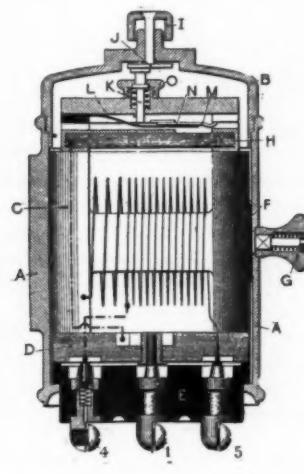


Fig. 2.

Fig. 1.—The Bosch Coil.—*A*, metal case containing coil; *B*, cover; *G*, commutator switch; *I*, starting switch; *E*, platinum plate-carrying contacts.

Fig. 2.—Sectional Drawing of the Bosch Coil.—*A*, metal case; *B*, cover; *C*, armature of the coil in form of double *T*; *D*, commutator plate attached to movable coil; *E*, fixed plate with contacts; *G*, commutator switch; *H*, condenser; *I*, starting switch; *J*, pin, with base of starting switch; *K*, platinum pin; *L*, spring with platinum contact; *M*, trembler (operating at moment of starting only); *N*, trembler spring; *O*, regulating screw; *P*, protective joint against dust and damp.

regretted but because it allowed the engine to be started on compression and frequently saved laborious cranking in cold weather. European practice has been towards the abolition of the storage battery to such an extent that probably nine-tenths of the leading makers use magneto only.

Thanks to the ingenuity of the Bosch experts, it is now possible to have the advantage of storage battery without the necessity for a complete double ignition system, the motor being started up from the seat—providing of course that a

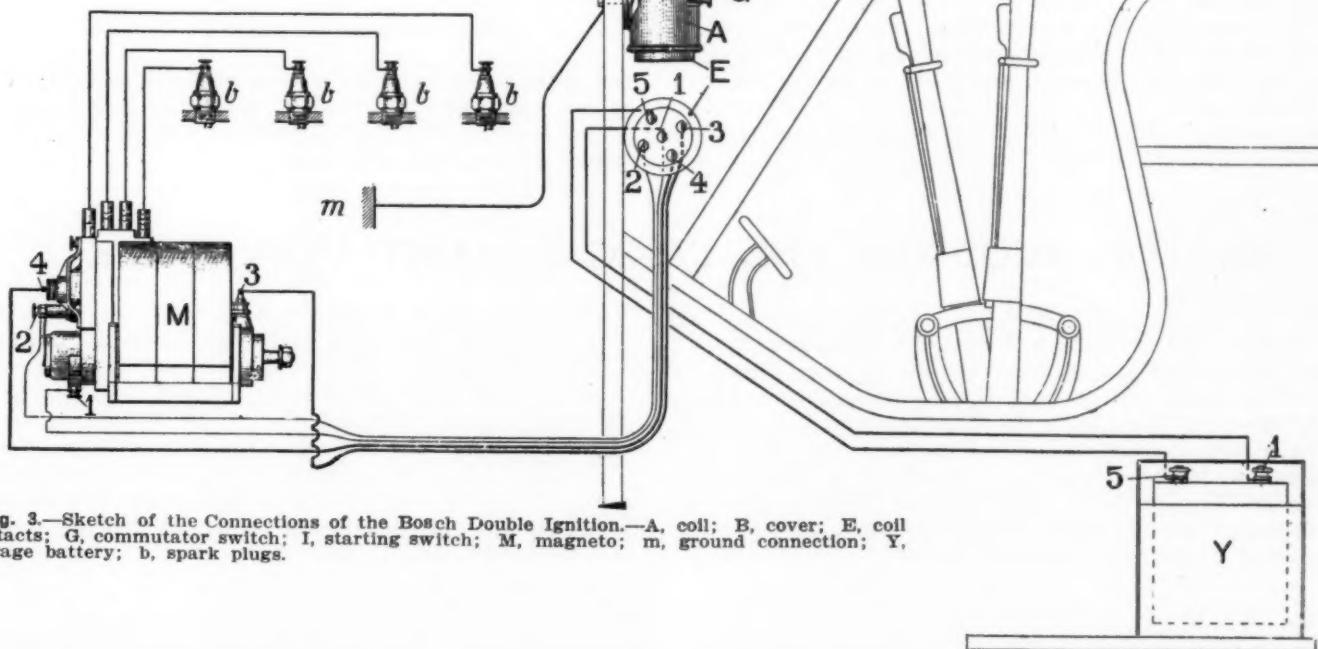


Fig. 3.—Sketch of the Connections of the Bosch Double Ignition.—*A*, coil; *B*, cover; *E*, coil contacts; *G*, commutator switch; *I*, starting switch; *M*, magneto; *m*, ground connection; *Y*, storage battery; *b*, spark plugs.

by magneto if the switch were pushed to the left; it would be by storage battery if it were moved to the right. There is a slot in the case for each of the three positions, the switch *G* being maintained there by means of a spring. To make a change of position it has first to be drawn outwards.

The condenser *H* is placed directly above the armature of the coil. One of its poles is given a ground connection, while the other is joined up to the central contact of the commutator. As one of the poles of the accumulator and the isolated contact of the magneto igniter are connected to the central contact the condenser is thus in parallel with the igniter.

All the parts just described come into operation when ignition is made continuously by storage battery; the apparatus working without the use of the trembler, the inherent defects of this organ are completely abolished and a reliable ignition is obtained. On the contrary, when the motor is started from the seat the trembler is momentarily put into operation to obtain the first sparks. This is necessary owing to the fact that the compression in the cylinders is never more than about half the maximum

value, and the first spark is not certain to produce an explosion. Once the motor has been started, however, the trembler is put out of operation.

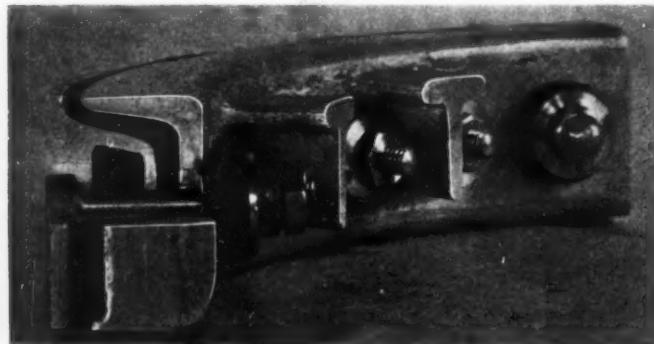
At the center of the cover of the case is a starting switch *I*, with a base *J*, against which a platinum pin *K* is pressed by means of a spring. On pressing down the switch *I* the pin *K* is driven down until it touches the platinum contact *L*. The trembler *M*, pushed upwards by the spring *N*, then commences to vibrate.

The circuit is formed by the ground connection of the coil, the pin *K*, the spring *L*, the commutator, the storage battery, the primary winding, and is closed by the ground connection of the coil. The current is broken when the trembler, drawn downwards, strikes the spring *L*, for the contact between this latter and the pin is suppressed.

Four of the current models of Bosch magnetos, constructed for double ignition, can be modified by the changing of a few parts for this new device. Four other models can also be changed for the new double ignition with very little trouble.

A NEW COMBINATION TIRE FOR HEAVY DUTY

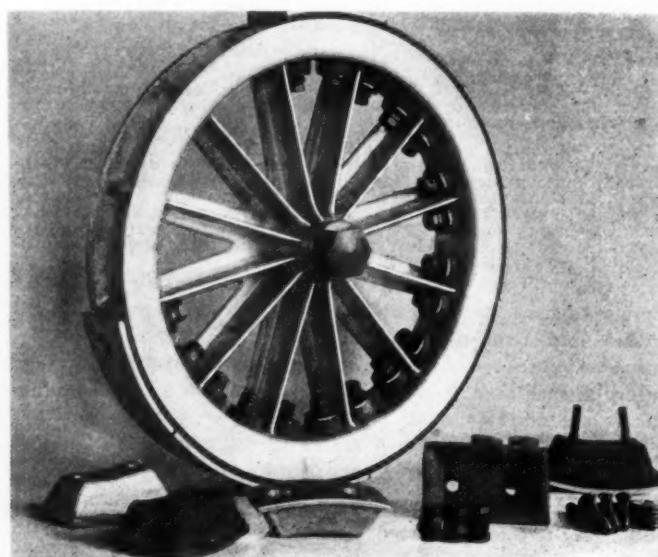
IN the maintenance of heavy trucks tire cost is one of the most important items, and many attempts have been made to produce a tire which would utilize the cushioning action of rubber and take the wear on a harder and less expensive substance. The latest type of combination tire to be put on the market is the invention of E. S. Lea, of Trenton, N. J. The tire is applied to specially made wheels, which have the hub, spokes and rim all in



Cross-section Lea Wheel Showing Tire Bolt Attachment.

one casting. Around the outer circumference are twelve deep recesses, each of which contains a cast steel shoe fitting in a thick rubber bed. The shoes nowhere come in contact with the rim, but have the cushioning action of the rubber on all sides. At the same time the entire wear is on the face of the shoes. The first wheels of this type, which were in use last winter in ice, mud and snow, had their shoes corrugated, but after the corrugations were entirely worn off it was found that the trac-

tion was as good as ever. They will therefore be left smooth in the future. Each shoe is held on by two bolts which pass through the rubber bed and the rim; these bolts have rubber washers so as to allow a certain amount of play in every direc-



View of Lea Wheel and Sections of the Tire.

tion, giving the shoes perfect freedom of movement to take care of any inequality in the road surface. Another commendable point is that these tires can be replaced at about one-third of the cost of ordinary solid rubber tires.

BOSTON ACQUIRED THE TAXICAB HABIT VERY QUICKLY

BOSTON, Sept. 1.—Another new taximeter cab company has just begun business in Boston, making four which are in operation. The latest addition is the Taxi-Service Company, of which A. E. Morrison of the Morrison-Price Company is general manager. Its offices are in the Hotel Lenox, and the company has secured stands at the railroad stations and at some hotels, though as yet its equipment is not sufficient to take up these options. The Taxi-Service Company used American Locomotive cabs and it already has five in service, keeping them when not in use at a garage on Huntington avenue.

Still another taximeter cab service has been started with two White steam cabs, said to be the first of the White Company's output of this kind of vehicle. The cabs have the smaller type of White engine and landauet bodies. They are operated from the White garage on Newbury street. A third concern has begun business in a small way with an Elmore and an Atlas cab.

The Taxi-Motor Cab Company, the first concern to establish a regular taximeter cab service in Boston with Thomas cabs, is meeting with good success and its first allotment of twenty-five cabs is kept constantly busy.

LETTERS INTERESTING AND INSTRUCTIVE

THREE-POINT SUSPENSION AND GRADES.

Editor THE AUTOMOBILE:

[1,531.]—I note that several first-class cars use the three-point suspension and the unit power plant, but that this practice is not uniform. I should like to have you show how the motor can be suspended from four points of the frame without danger of having the alignment destroyed by road shocks and strains. I should also like your opinion of the unit power plant, and of the construction in which the change-gear is mounted on the rear axle.

On page 317 of your issue of August 27 you show a picture of an auto climbing what is claimed to be a 50 per cent. grade. If the grade shown is that steep, will you please explain how the percentage is reckoned?

READER.

Cambridge, O.

The design of automobiles, like most other things, is a series of compromises. Three-point suspension and the unit power plant have many undeniable advantages, but they also have disadvantages which some designers appear to think more weighty. If one attempted to make a car in which every part was designed in the one and only correct way, the result would simply be a nightmare. The really good automobile is the one which, avoiding positive mistakes, embodies as many

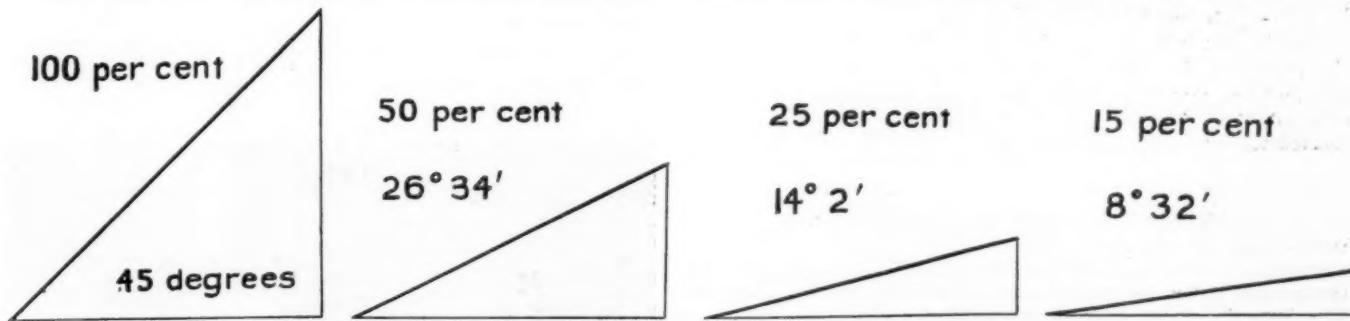


Diagram Illustrating the Various Percentages of Grades and the Angles to Which They Correspond.

good features as will fit into a harmonious whole. The four-point suspension may easily be made rigid enough to withstand the strains due to road shocks.

In answer to the grade question, there is a pretty general impression that a 100 per cent. grade is straight up and down, 50 per cent. at an angle of 45 degrees from horizontal, and so on. In reality, the per cent. grade is simply the number of feet of rise to each hundred feet horizontally. Thus, a 100 per cent. grade is a rise of 100 feet in each 100 feet, 50 per cent. a rise of 50 feet in each 100. The per cent. grade, expressed decimal, is the tangent of the angle of elevation from the horizontal.

THE LOWEST SPEED OF AN AUTOMOBILE.

Editor THE AUTOMOBILE:

[1,532.]—We desire some authoritative information as to the lowest speed of an automobile. Can the average make of automobile, when necessary, run at a rate as low as ten miles an hour without injury to the machine? And would it in your opinion be under as good control at this speed as at a higher rate?

Suffolk, Va.

J. M. BUTLER & SON.

Certainly an automobile can run at ten miles an hour without injury, and also be under just as good control. Any good machine ought to be able to run at five miles an hour indefinitely without the least trouble, and could run slower than that on the low gears, although if this were continued very long the engine would probably overheat. We do not see how the question ever arose, unless you were thinking of high-gear racing cars, which would probably overheat if run steadily at ten miles an hour. As to the ordinary touring car, however, there cannot be the least doubt of its ability to maintain this speed as long as desired, though there is no reason why it should ever be necessary to do so.

THE USE OF "DOPE" IN A GEAR SET.

Editor THE AUTOMOBILE:

[1,533.]—I have a light four-cylinder runabout and although it is new, only been run a few months this season, I find that the planetary transmission makes what appears to be a great deal of unnecessary noise on the low speed, and more particularly on the reverse. I have been using oil in it as a lubricant and the local repairman informs me that a compound which he calls "dope," i.e., a heavy mixture of oil and grease, would remedy the trouble. Not having any too much confidence in the repairman, I would like to have this from some higher authority before applying it. Will it do as recommended, and, what is more important, will it have any bad effect?

W. T. LANSING.

Richmond, Va.

Given a large number of metal pinions running together and noise is inevitable; make these pinions small and revolve them at a high speed and the undesirable effect is increased. This is the case of the planetary gear-set on the small runabout of to-day. Its pinions are very small and they have to revolve at a very high speed, so that the elimination of the noise is impossible. Whether it is advisable to attempt to muffle it is another matter. Makers of such cars usually advise the use of a

light oil in the gear-set on account of the small size of the pinions and their high turning speed, owing to the much greater resistance a heavy lubricant would impose on them. The use of "dope" will drown the noise to a very great extent, and as both the low speed and reverse gears are employed but little on such cars, it is a question whether it is better to put up with the noise during the comparatively short time in which its presence is unavoidable, or to fill the gear-case with a heavy lubricant, and put up with the loss in efficiency for the same reason, i.e., that the working under such conditions only lasts but a short time. The use of "dope" for this purpose cannot do any harm that we can see and is not so apt to leak out of the case, as is the oil, so that where a driver prefers a slightly lesser efficient gear to an extremely noisy one, there appears to be no reason why he should not make use of such a lubricant.

BECAUSE COEFFICIENT OF FRICTION IS HIGHER.

Editor THE AUTOMOBILE:

[1,534.]—Can you tell me why it is necessary to use different metals in brakes? That is, why should the brake band, or shoe, have to be of a different metal than the drum upon which it acted? I have been puzzled more or less over this, and as some makers go to considerable expense to provide a different metal, usually bronze, I have felt that there must be some good reason for it, but none of my friends have been able to enlighten me.

BRAKES.

This is simply because when two pieces of the same kind of metal are rubbed together their coefficient of friction is not as high as when two similar metals are placed in contact and rubbed one over the other. In other words, the same kind of metal tends to slip upon itself more than a dissimilar piece would, such as bronze on cast iron or steel. For the same reason some makers do not rely upon different metals for this purpose, but

employ facings of special friction materials. Advantage is taken of this reduced coefficient of one metal upon itself in making pistons and cylinders of cast iron, as two pieces of cast iron will work better together than would any two pieces of dissimilar metal, that is, for this purpose, where the object is to reduce, and not to increase, the friction, as is the case where brakes are concerned.

WHAT TOLL FOR USE OF A PARKWAY?

Editor THE AUTOMOBILE:

[1,535.]—1. What rate per mile can the average automobilist afford to pay for the privilege of traveling over a comparatively straight and level macadamized road used only by automobiles, in preference to traveling over the ordinary country road?

2. Would a road built specially for automobilists along the route of an electric railway have a tendency to increase or decrease the amount of travel on the electric line?

J. A. L.

Spokane, Wash.

It seems to us that you are putting the cart before the horse. A better way to go about the question would be to find the cost of constructing the road and figure the maintenance expense and the profits desired, and divide the total amount among the number of automobilists who could be expected to use it. As to how much the automobilist would be willing to pay rather than take to the public road, that depends so much on the individual pocketbook that it would be vain to attempt any generalizations.

We do not believe that the automobile road would affect the travel on the electric line in any way. People who own automobiles would probably use them in preference to the cars whether there was a special road or not. We will be pleased to print any other communications on this subject.

LEAKING OIL AND DECARBONIZERS.

Editor THE AUTOMOBILE:

[1,536.]—1. Our auto leaks considerable oil when standing in the garage and it has been our custom to save it. Is it possible to filter it so that it can be used again, and if so, how?

2. What possible harm can come from the use of the "decarbonizers" which one sees advertised so much? A SUBSCRIBER.

Attleboro, Mass.

The value of the oil as a lubricant depends on how long it has already been in use in the crankcase or gearcase. If you think it worth while, you could strain it through fine wire gauze. The best plan, however, would be to stop the leak, as there can be no excuse for the car's dripping oil at all. It may be that some of the drain cocks in the crankcase or gearcase are not completely closed; or else the leak may be through bearings which have become slightly worn or which are not provided with proper stuffing boxes. As the car probably loses as much oil on the road as it does in the garage, an hour's attention to the cause of the leak would prove to be good economy in the end.

The only way in which "decarbonizer" could damage the engine would be by corroding the cylinders or valves, through chemical action. We have had no personal experience with any of these compounds, but all the letters we have received concerning them seem very favorable.

EXCESSIVE CONSUMPTION OF FUEL.

Editor THE AUTOMOBILE:

[1,537.]—As a reader of "The Automobile" I wish to take advantage of the answer which I hope to receive in the next issue of this paper. I have a Pierce-Arrow car, 1906 model, 30 horsepower, in fine condition, everything perfect, and it consumes one gallon of gasoline to seven miles. When it was new I could go nine miles on a gallon. I know that my carburetor is perfect and everything else in the same condition. Can you kindly help me out with this matter and find out what other 1906 Pierce-Arrow cars do on one gallon of gasoline?

BEN BOYD.

Bath Beach, N. Y.

Despite your assertion to the contrary, it looks as if there was something radically wrong with your carburetor. A car like yours should be able to cover at least fifteen miles to

the gallon under ordinary conditions. Before taking the matter up with the makers, however, there is another possibility—a rather delicate one. Are you sure you get all the gasoline you pay for, and use all you get? A little investigation on those lines has cured more than one case of excessive consumption, and that without recourse to the repair shop.

INFORMATION WANTED ABOUT A SIX-CYCLE.

Editor THE AUTOMOBILE:

[1,538.]—In one of the issues of THE AUTOMOBILE I read of a six-cycle engine that was made and tried out in England. I wish to refer to this article and would like to have you let me know what number it was published in. I am quite certain it was shortly after the first of the year.

R. S. PORTER.

Minneapolis, Minn.

That six-cycle article certainly sounds familiar, and we believe that we published it sometime within the last year, at least; but owing to the shortness of the article it was not indexed in our files, and an exhaustive search has as yet failed to bring it to light. We call the attention of our readers to the matter and hope some one of them will have a better memory than ours and will be able to help you out.

THE COAL-BURNING STEAMER ON THE ROAD.

Editor THE AUTOMOBILE:

[1,539.]—I enclose a photograph of my coal-burning steam car. It works fine; the steel tires are a success and my drive axle works well without any differential. I burn either kerosene or coal, the



M. W. Hazelton's Coal-burning Steam Automobile.

latter preferably, and can raise 100 pounds of steam from cold water in six minutes. This first car cost double what they can be made for in lots of a half-dozen at a time, as I got the parts from six different States. I would like to correspond with parties interested in this car with a view of manufacturing it. The cost of a two-seated car, all of the best possible material, would be about \$700, and it will last longer than any \$2,000 car on the market. The tires will last ten years.

M. W. HAZELTON.

Oneonta, N. Y.

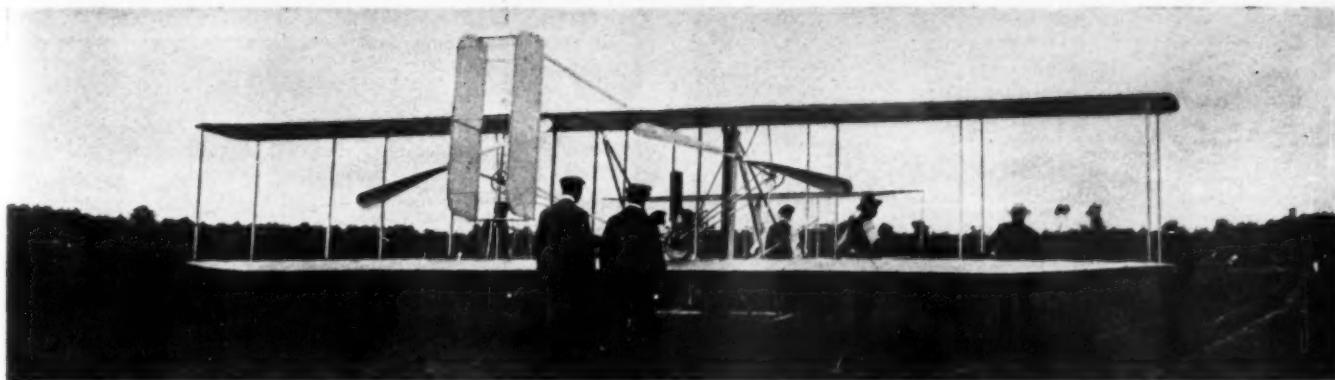
CONCERNING ONE MAKE OF CARBURETER.

Editor THE AUTOMOBILE:

[1,540.]—In reference to letter 1517, replying to the second question, beg to say that I have been using one of the Model W Holley carburetors on my Ford runabout all this year and would not change it for any other. I first got it without the universal joint for the needle valve, but secured one later and now would not do without it. I can always regulate the mixture according to the atmospheric conditions, and also according to the requirements of the road, as for heavy pulling and hill climbing a slightly richer mixture seems to help. I can drive at a walk on high gear and have found it flexible for varying speeds. Judging from my own experience, I feel sure that "Spark Gap" would be more than pleased with one, and I would certainly recommend buying it with the universal joint.

W. S. HAGAMAN.

Sharon Hill, Pa.



Wilbur Wright Making Preparations for One of His Many Successful Flights on the Old Fair Grounds at Le Mans, France.

WHAT THE BROTHERS WRIGHT ARE ACCOMPLISHING

WASHINGTON, D. C., Sept. 8.—Orville Wright, who is in charge of the Wright Brothers' aeroplane which was built under contract for the U. S. Army, arrived at the aeronautic testing grounds near here last week and at once began the work of tuning up his machine. He made his first flight Thursday evening. The aeroplane was launched by a falling weight after the now familiar Wright method, and rose slowly to a height of about twenty feet. Mr. Wright was noticeably nervous, and after being in the air for one minute and eleven seconds made a wrong movement with one of the levers, which brought the machine forcibly to the ground and broke one of the skids. Friday Mr. Wright tried again, after making the necessary repairs. This time he had the machine under perfect control and remained in the air four minutes and fifteen seconds, covering between two and two and one-half miles. He alighted gradually and without the least jar, and said afterwards that he came down merely because he did not want to attempt too much at once with a new machine.

On Labor Day Wright made one short flight of only 54 seconds, descending because of a defect in one of the steering levers. He has until September 28 to complete his official trials, and does not intend to take any unnecessary risks. He wishes to make several more preliminary flights to become better acquainted with the machine, so that the possibility of failure will be reduced to the minimum. In order not to crowd the time limit too closely, however, he will probably begin the official flights this week. It was learned to-day that Wright is preparing to go to Europe as soon as the Fort Myer tests are concluded. This is taken as confirmation of the report that a number of foreign governments are endeavoring to obtain Wright aeroplanes for military purposes.

How Auto Helped Aeronautically.

WASHINGTON, D. C., Sept. 1.—An automobile showed its innate superiority to Missouri mules as a tractor the other day when it was necessary to remove the Wright aeroplane from the Signal Corps balloon shed, at Fort Meyer, Va., to the balloon tent formerly occupied by the U. S. dirigible No. 1 on the aeronautic field. A 30-horsepower water-cooled Aerocar, driven by the owner, S. C. Crane, of Dayton, O., did the work in such a satisfactory manner that in spite of the rough spots of the road and a terrific grade, the aeroplane was delivered safely at its destination.

When the sky motor had been partially demounted in the after-

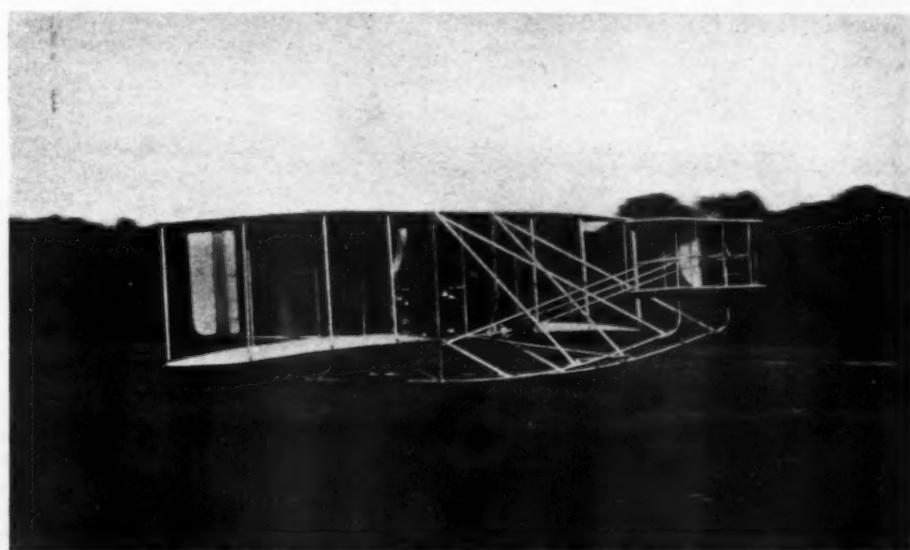
noon it was placed upon a springless quartermaster's wagon with the length of the planes parallel with the length of the wagon. Then a pair of husky army mules were hitched to the end of the tongue. Mr. Crane, who is a friend of Mr. Wright, was nearby with his car, and someone suggested that the automobile be used; but the mules started up the hill with their precious burden. The animals went at the job with jumps and starts, however, and Mr. Wright, usually calm and undisturbed, called excitedly to the muleteer to halt. When this had been accomplished it was but a few moments' work to hook on the Aerocar, so well adapted in name, at any rate, for the task.

With the low gears enmeshed the automobile started slowly without the slightest jerk taking up the slack, and towing the heavy army wagon with its strange freight up the rough road that led to the hill top. A squad of photographic sharpshooters ranged on the abutting hillside fired many a shot as the strange spectacle moved along.

Meeting a coach-and-four standing at the curb, Mr. Wright had the automobile stopped and got out to tell the grooms to move to some better place. He would not allow the machine to proceed until the owner of the four-in-hand had stated that the horses would not jump.

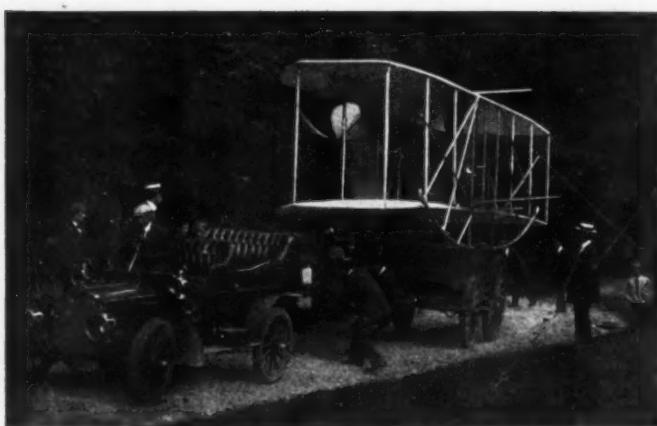
FLYING TO BE RENEWED AT ISSY.

PARIS, Sept. 3.—After turning the aeronauts out of the Issy-les-Moulineaux drill ground excepting for a paltry two hours at daybreak, the Minister of War has come to the decision that



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Orville Wright's Aeroplane in Flight at Ft. Myer, Va.



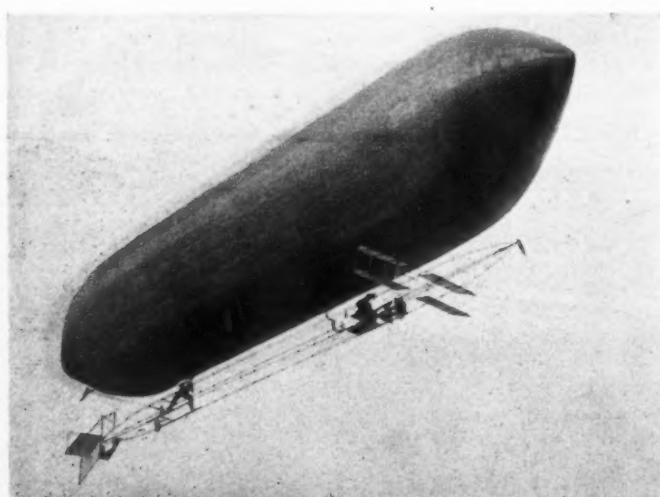
Aerocar Hauling Wright Aeroplane to Shed.

it would be better to encourage what will be, in more senses than one, a rising industry, and has sent forth a declaration, after consultation with Chief of Police Lepine, that all sky pilots can come back to the suburban plain and experiment from sunrise to sunset. The only restriction is that there must be no aeronautical flights when the ground is being used by the military; as the troops are only on the ground about two hours every morning, the loss is not great.

The Issy ground will be rigorously closed to the public, a force of soldiers and police always being on guard when flights are being attempted. Though prevented from wandering on the ground the public will not, however, be denied a view of the flying machines, the high, broad walls of the fortifications being ideal gallery seats free to all. It is further announced that Colonel Picquard has other schemes in preparation for the encouragement of aeronautical experiments.

There is no doubt that this change of attitude has largely been brought about by the presence of Wilbur Wright in France. The American's demonstrations at Le Mans have shown that France is not alone in the struggle to obtain the secret of flight. Leading personalities in the aeronautical world have pointed out this danger to the authorities, and in order that they should not be left behind in the race for supremacy, official aid has been given.

Only a few days ago there was no indication whatever that the authorities would consent to allow the Issy ground to be used again except under annoying restrictions, and in view of this several aeronauts had made preparations to move further afield. The Antoinette Company has secured the island of Tournebos, in the Seine, between Les Andelys and Rouen, and would remove there their own and many of the machines built by them; Henry Farman immediately on his return from New



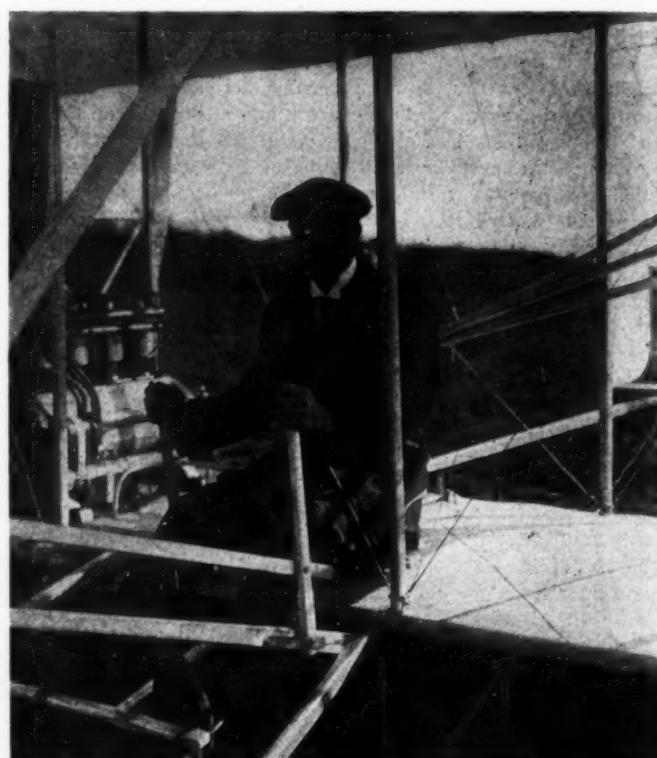
Copyright, 1908, by Underwood & Underwood, New York.
Baldwin Airship, Accepted by U. S. Government.

York had fixed upon a plain at Verneuil, 20 miles out of Paris, for further experiments; and Leon Delagrange was still in quest of a private ground.

Entries for the aeronautical section of the Paris annual Salon are sufficiently large to give assurance of a very valuable display of modern flying machines. Several machines of the Farman and Delagrange type are promised, and Esnault-Pelterie will show both aeroplanes and his special type of light-weight motor.

Wilbur Wright Remains at Le Mans.

LE MANS, Sept. 3.—Ill-luck attended Wilbur Wright on his first attempt at flight after an enforced idleness of eight days. Just when the start was about to be given one of the mechanics caught his arm in a wire operating the rear rudder, stretching it considerably. Wilbur Wright declared that the matter was of no importance, and the order to start was consequently given. After a few seconds in the air, however, it was noticed that the pilot was not complete master of his machine. After one minute an attempt to descend was made, but instead of being carried



Wilbur Wright in the Operator's Seat.

out with the usual gracefulness the machine refused to obey its helm, heeled over, then came to earth brusly, breaking one of the skates. The broken part was repaired the same day.

Wilbur Wright declares that he will remain at Le Mans until the contract with the French committee has been fully accomplished. He will then probably proceed to Berlin, to make flights before the German army authorities. There is no truth, he declares, in the report that he is considering the crossing of the English Channel from Calais to Dover, such a journey in the present state of aeronautics being a foolhardy venture.

The special prize for a flight of not less than 82 feet in height will also be competed for at an early date, Wilbur Wright declaring that he can get over the difficulty requiring the machine to start from the ground by its own power. He will either start on the catapult, descend until he skims the ground and rise again for the height test, or start up direct from the ground without the use of any apparatus.

A dinner in honor of Wilbur Wright was given at the Hotel du Dauphin, Le Mans, by M. and Madame Lazare Weiller. Among those present being most of the French aeronauts gathered at Le Mans to view the flights, and Baron d'Etournelles de Constant.

NEXT GRAND PRIX NEAR CHATEAULAND.

PARIS, Sept. 3.—It is in the Anjou district, on the borderland of the famous chateau country, that the next Grand Prix will be held. No official decision has been arrived at, but Chairman René de Knyff, of the Racing Board, has expressed himself as convinced that this is the ideal course for 1909, and doubtless his colleagues will share his view at the next meeting of the board. The adoption of the course will be conditional on the raising of a subvention of \$20,000, an amount that the Anglais believe they can get together.

The course, which is about 60 miles to the west of the town of Tours and in the valley of the Loire, was first proposed in 1906, its length then being about 70 miles. The town of Nantes, though some distance to the west of the proposed course, would profit by the race and decided to contribute one-third of the subvention demanded by the club. Since 1906, however, the Sporting Commission's opinion regarding the length of a course has changed, with the result that instead of 70 miles only 40 are required, a western portion has been left out and Nantes is no longer interested in the scheme. It thus devolves on Anjou and district to raise the necessary amount, which it will do by amounts contributed by the General Council, the Municipal Council and private individuals. Being in a district that annually attracts thousands of tourists, the benefit of the Grand Prix will be more widespread than is usual, with the result that all the towns along the Loire valley may be expected to contribute, and even Tours will not keep out of the movement. With such prospects of raising the subvention it is safe to declare that the 1909 Grand Prix be held at Anjou. The road surface is good throughout, the course being about as fast as at Dieppe.

ANOTHER FRENCH VOITURETTE RACE.

PARIS, Aug. 22.—There are prospects of good sport at the Voiturette race, to be held near Compiègne September 10 to 13, the present entries standing at thirteen, with the certainty of at least nine more being brought in before final closing. Those now on the lists comprise a Prod'homme, a Truffault, three Taine, three Lion-Peugeot, three Le Metais, and three Werner. The promised entries are full teams of Sizaire-Naudin, Aries, and Guillemin. Practically all the cars taking part in the Compiègne event ran in the voiturette Grand Prix at Dieppe, the drivers for the local event being in most cases the same as for the previous race. There are changes for the Werner team, the chief of which is now A. Autran, who was pilot with St. Chaffray on the De Dion New York-Paris car.

The task that the one lungers of 3.9 inches bore will have to accomplish is to race round a closed and somewhat hilly course for a total distance of rather more than 300 miles, all attention to the car after the start has been given being confined to driver and mechanic. Regulations differ slightly from those of the Voiturette Grand Prix in the bore limits allowed to two, three and four-cylinder engines, these having been carried to 80, 70 and 65 millimeters for each class. As the Grand Prix race showed, multiple cylinder engines with the previous bores were at a slight disadvantage. Two-cycle and the Gobron type of engines are admitted on the same footing as the four-cycle single piston motor.

CHATEAU THIERRY BECOMES HISTORY.

PARIS, Aug. 22.—After six consecutive years, Chateau Thierry has been abandoned as the scene of the annual autumnal hill climb. Last year a soldier on duty was killed by a motorcyclist in his endeavors to avoid an over-officious local fireman. A law-suit followed, bad feeling sprung up between the municipality and the organizers of the competition, with the result that the district has been definitely abandoned. Though the value of the Chateau Thierry hill climb had gradually decreased as the automobile reached perfection, it still retained much of the importance which attached to one of the earliest automobile testing grounds in the neighborhood of Paris.

BRITISH TOURIST TROPHY RACE.

LONDON, Sept. 4.—The sole racing event promoted this year by the R. A. C. is to take place on September 24, the Isle of Man being, as usual, the scene of operations. The 38-mile course originally used for the Gordon Bennett eliminating trials has been reverted to in place of the shorter lap used in the previous T. T. races. Instead of the fuel limitation which has been the feature of these events, the cylinder bore is restricted this year, the maximum for a four-cylinder engine being four inches. Forty entries have been received, of which 22 are British and 18 foreign, no American car figuring in the latter section.

Dealing with the cars themselves, some extraordinary statements have been published, both with respect to the power of the engines and the speed attained in practice. The Humber Co. credibly state that their engine has developed over 70 B.H.P. on test. This engine has stroke of 6 inches compared with 4 1/2-inch stroke of the Calthorpe and the 6 1/2-inch of the Arrol Johnston.

In an event at the last Brooklands meeting, the Hutton car, which is entered for the coming race, was certified to average 83 miles an hour, and this fact lends some credence to the belief that the race will be extremely fast. Practicing has not yet commenced, for, owing to the crowded state of the island at present, competitors are not allowed to land their cars till September 3, and then they must not be on the road after 9 A. M.

The whole of the course has been treated with a dust-laying preparation to lessen risk of accident.

BRITISH ARMY TO HAVE TRACTOR EVENT.

LONDON, Aug. 22.—Being in the market for automobile tractors capable of handling eight-ton loads, the British Army authorities announce a competition for February next. The vehicle winning the competition will be bought at the conclusion of the trial at the price stated on engagement blank, providing the experts consider it suitable for army work. The authorities also promise provisionally to buy other vehicles if satisfactory.

Full liberty is given in the class of engine and fuel used, but price of the tractor must not exceed \$5,000. Economy in fuel consumption is essential, and liquid having a flash point of less than 75 degrees Fahr. will be barred. Kerosene may be used for starting, providing the engine can be started from cold in less than twenty minutes. Points on which the awards will be made are, among others, distance and average speed at which eight-ton loads can be hauled without replenishments, cost and efficiency, hill climbing power and ability to work away from highways, accessibility, ease of repair, absence of noise, vibration, etc.

The test will extend over fourteen days, during which time the vehicles will have to run over level and hilly roads, submit to brake tests and be dismounted for examination.

GRAND PRIX CARS AT BROOKLANDS.

LONDON, Aug. 27.—Grand Prix racers will have an opportunity of showing their ability on the track in a race that has been specially designed for them at Brooklands, Saturday, October 3. The general conditions as regards engine sizes, weights, replenishments, tire changes and colors are the same as those for the French 1908 Grand Prix. The distance will be about 100 kilometers. Eight cars of non-British origin must be entered, or the executive committee will have the right to declare the race void. The sporting commission of the French club has been invited to appoint three stewards to adjudicate on the race in conjunction with the British representatives, and the automobile club of each country having made an entry is invited to appoint a representative. Entries close on September 25, the fee being \$200 per car, of which sum \$160 will be returned if the car starts.

Nazzaro, the famous Italian racing driver, winner of last year's Grand Prix, has announced that he will give up racing for 1909. In September he is to lead to the altar a charming young lady of Turin.



Seven Bluecoats in a Gearless Great Six Patrol Car.

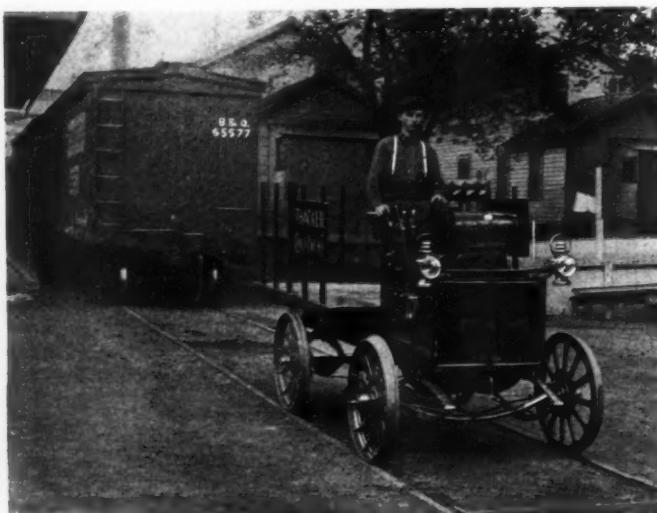
LOS ANGELES HAS AUTOMOBILE PATROL.

LOS ANGELES, CAL., Sept. 5.—The police department of this city recently acquired a Gearless "Great Six" for use as a special patrol car. It is fitted with searchlight, fire extinguisher, stretcher for injured persons and other special appliances for police work. The photograph shows the car with full load of bluecoats in front of one of the police sub-stations. It has been in use for over eight months now and has made such a good impression on the authorities that they have placed with the Gearless Motor Car Company an order for a special 14-passenger patrol car. This will be fitted with a solid paneled enclosed body, and will be the largest automobile patrol in use in the United States.

AUTO TRUCKS WITH FLANGED WHEELS.

In the illustration shown below is one of the new 2,000-pound trucks sold by the H. H. Franklin Mfg. Co., of Syracuse, N. Y., to the Thacker Coal and Coke Company, through the Franklin Company's Philadelphia agents, the Quaker City Automobile Company. This truck has been fitted with steel-flanged wheels, and will be run upon the railroad tracks throughout the Pennsylvania mines and shipping yards of the Thacker Company for carrying supplies and general utility purposes.

This use of the automobile truck in the transportation of coal mine supplies is another step in advance, and proves the great variety of uses to which trucks can be put. It can be made to effectually supersede the time-honored hand car, and will undoubtedly supplant it in the near future for general railroad purposes.



Franklin 2,000-lb. Truck for Pennsylvania Mine Work.

NEW BUILDINGS FOR PEERLESS.

CLEVELAND, Sept. 2.—Within the next two years, beginning within a month or two, the Peerless Motor Car Co., of this city, will spend in the neighborhood of \$750,000 for new buildings, adding them to the present group. The new structures will be erected just north of the present plant.

The first of the new structures will be built in the near future, and will be a repair shop 53x130 feet long. It will be three stories high, of reinforced concrete and steel. The cost will be in the neighborhood of \$26,000. The rest of the buildings in the new arrangement will cost upward of \$350,000 with machinery that will bring the total well up to \$750,000. This will include a new erecting and assembling building with machine shop, in front of which structures will be the administration and shop offices, respectively. When completed, the front will be of very attractive design.

The present plant, consisting of machine shops, erecting and assembling shops, foundry and other departments, is two stories high. The extensions will all be three stories. The plant as it now stands was developed in about three years. A fifty-foot street will separate the present and new groups. The construction as planned will take about two years altogether.



Shearing Sheep with a Cadillac in New Zealand.

HOW RAMBLER PARTS ARE SUPPLIED.

KENOSHA, Wis., Aug. 31.—All automobile factories now recognize the importance of being able to fill orders for repair parts with quickness and dispatch. Thomas B. Jeffery and Company, of this city, the makers of the Rambler, claim to have in stock duplicates of every part of every Rambler manufactured since 1902, and further to be able to ship replacements on the same day the order reaches the factory. This promptness is due to the thorough organization of the sundry department. All the parts supplied on order are inspected by two men to insure accuracy, and again, in the shipping room, the order is timestamped and double checked to avoid mixing orders in packing. The sundry department contains 1,500 bins of various sizes, all arranged in sections eight feet in height. In this room are kept only such parts as are in most frequent demand; others are stored in a reserve stock room. In addition there is the annex, motor stock, transmission stock and axle stock rooms.

The fact that there are fourteen thousand Rambler cars in use, many of them now in their fifth or sixth year of service, makes this department very valuable to owners, while the fact that all Rambler parts are made in the Rambler factory enables the company to supply them very cheaply. Although repair parts may not be needed during the first or second season of operation, the company sees the wisdom of manufacturing and keeping on hand extra parts of all models so that in years to come owners may procure them without delay and at a reasonable cost.

PLANS FOR THE "AMERICAN" TRUCK.

LOCKPORT, N. Y., Sept. 8.—The recent announcement that E. B. Olmsted, one of the pioneers in the manufacture and sale of commercial automobiles, had taken over the management and control of the American Motor Truck Company, of this city, is an assurance that the "American" truck will be frequently heard from next season. This company has been manufacturing commercial vehicles exclusively since 1904. Two years ago a large building formerly occupied by the Holley Mfg. Co., was secured and equipped with modern machinery and appliances, and all parts of the truck are now made in this plant. Plans are now under consideration for extensions to permit of a larger output. The main erecting room occupies the entire ground floor of the main building, which has an area of nearly 25,000 square feet. Most of the machine work is done in the galleries. The testing room and the body making and wood working departments have an area of about 4,000 square feet each.

E. B. OLMS TED

The plant is equipped with traveling cranes for facility in handling heavy parts, an air compressor for riveting, electric drills, and in fact every modern appliance for performing the best work in the shortest time. The entire machinery of the plant is driven by electricity, the current being generated at Niagara Falls, twenty miles distant.

As to the plans of the company for 1909, Mr. Olmsted states that in addition to its three and five-ton gasoline trucks and passenger stages, it will have a line of trucks and delivery wagons from one ton upward, and passenger vehicles from ten passengers up, both open and closed types.

El Paso, Tex.—Probably the first public delivery service by motorcycle is that enjoyed by this city. An enterprising motorcycle agent originated the idea, and now has a complete system for either quick delivery or messenger service. The rates are very reasonable, and it is obvious that in the way of speed the motorcycle has a very perceptible advantage over the usual messenger boy with his cigarette and "Diamond Dick."

Tampa, Fla.—The automobile line between Bartow and Mulberry, the formation of which was announced recently, has proved such a success that the management has been forced to put on another car. In addition a trip is made to Tampa on Sundays.



Main Erecting Room, American Motor Truck Co., Lockport, N. Y.



Rapid Cars Loading Passengers at Station for Mudavia.

COMMERCIAL RAPIDS CHEAPER THAN LIVERY.

ATTICA, IND., Sept. 8.—Five miles from the railroad station at Attica is "Mudavia," a resort very popular with people from Chicago and St. Louis because of its mud baths. The hotel can accommodate about two hundred guests comfortably, and represents a large investment. Formerly a livery service was maintained between Attica and the Mudavia Hotel, but early this year it was replaced by an automobile service. Three cars, furnished by the Rapid Motor Vehicle Company, of Pontiac, Mich., are used, two for passengers, twelve-seated, and the other for baggage. Now, upon arriving at the railroad station at Attica, guests are taken care of by uniformed attendants, placed in the automobiles and taken for a five-mile spin, through a beautiful country and over some of the best roads in the State, reaching the hotel in about half an hour. From four to eight trips are made a day with each car, meeting all trains and eliminating any waits for conveyances. The service is in every way superior to that of the horse livery, and is maintained at a saving of about \$250 a month. The Kramer-Allen Motor Company, of Attica, which cares for the cars, has made out the following statement of the expense of the service during the month of June:

Items—	'Bus No. 1	'Bus No. 2	Truck.
Driver's salary	\$40.00	\$40.00	\$36.00
Cost of oil.....	2.70	4.50	1.57
Cost of gasoline	10.78	16.06	12.10
Miscellaneous	39.60	28.93	59.85
Total cost	93.08	89.49	109.52
Gallons of oil used.....	6	10	3½
Gallons of gasoline used.....	98	146	110
Number of passengers, regular.....	240	487	4
Number of passengers, D. H.....	32	51	17
Number of trunks.....	206
Number of days operated.....	18	27	29
Cost per day.....	\$5.17	\$3.31	\$3.77
Number of miles operated.....	506	990	660
Cost per mile.....	\$1.182	\$.093	\$1.65

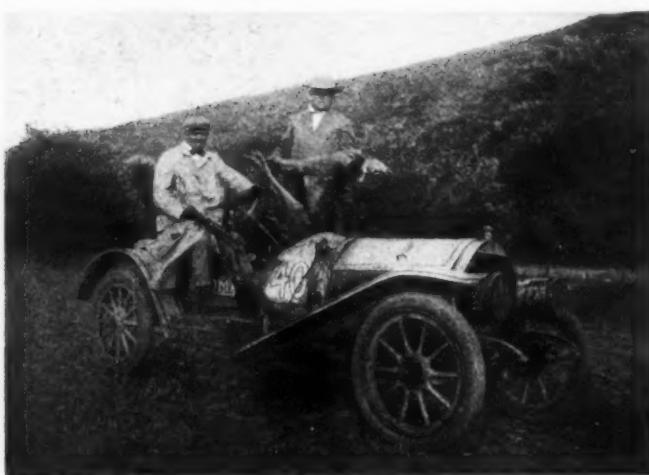
These results are the more remarkable when it is considered that the cars were run, not over paved streets, but over country roads which, although good of their kind, were far from ideal.

ILLUSTRATING THE GROWTH OF AUTOING.

Washington, D. C.—The old horse-drawn sprinkling carts will soon disappear from the streets of this city, and will be replaced by the latest type of automobile sprinklers. Superintendent McFarland, of the local water department, is responsible for the change. He is a firm believer in modern methods and succeeded in converting the commissioners to his view of the question.

Columbus, Ohio.—An automobile line has been started by Columbus promoters between Marysville and Magnetic Springs, connecting with the interurban line to Marion, Richwood and Columbus. The car carries 32 passengers and makes two trips daily.

Greensburg, Ind.—Greensburg and Clarksburg are now connected by a new automobile line, and another will shortly be established between Greensburg, Osgood, Napoleon and Versailles.



The "Blue Bird" Captures a Deer en Route.

600 MILES THROUGH THE MOJAVE DESERT.

The same Chalmers-Detroit Forty *Bluebird* which won the Rocky Mountain Cup race at Denver last Memorial Day has just completed a wonderful trip of 600 miles through the Mojave Desert of Southern California.

The tourists encountered quicksand, rivers, mudholes and a cloudburst, in addition to the ordinary desert obstacles of deep sand, cacti, hills and gullies. The car averaged 30 miles an hour, which is very high for that kind of country.

The party consisted of Lawrence Knapp, an expert driver, and Joe Desmond, a wealthy business man of Los Angeles. Their objective point was Owens River, from which a huge aqueduct, 250 miles long, is being built to supply Los Angeles with water.

In fording a pond apparently shallow, 85 miles out of Los Angeles, the car was nearly submerged at a place where the road had been washed away. The magneto was soaked and had to be dried out in the hot sun. No other trouble.

In Red Rock Canyon the party encountered quicksand. The car sank until the runningboards rested flat on the surface of the sand. Only by the hardest kind of work was it jacked up and pulled out. The following day heavy rain and mud were encountered. Two days were spent visiting various camps and then the return journey was made. Driver Knapp reported that except for taking the magneto apart to dry, not a single adjustment was made on the entire trip.

It will specially interest American tourists to learn that the Dowager Queen of Spain has been the first motorist to legitimately cross the great St. Bernard in an auto. The Italian side of the road is open, the Swiss, on the other hand, closed, and as Her Majesty desired to pass she telegraphed to the Swiss government for permission, which was at once granted.



Emerging from San Francisquito Canyon.

**THE AUTOMOBILE CALENDAR.
AMERICAN.****Shows and Meetings.**

- Sept. 18-19....—Cleveland, Third Quarterly Meeting for 1908, Society of Automobile Engineers.
- Sept. 25-26....—Atlantic City, N. J., Good Roads and Legislative Convention, Associated Clubs of New Jersey.
- Dec. 31-Jan. 7.—New York City, Grand Central Palace, Ninth Annual Automobile Show, conducted by the American Motor Car Manufacturers' Association, with Exhibits by the Importers' Automobile Salon, Inc., Alfred Reeves, general manager, 29 West 42d St.
- Jan. 16-23....—New York City, Madison Square Garden, Ninth Annual National Show of the Association of Licensed Automobile Manufacturers, Office of Secretary, 7 West 42d St., New York City.
- February, 1909.—Chicago Coliseum and First Regiment Armory, Eighth Annual National Exhibition, National Association of Automobile Manufacturers. (Exact date to be announced.)

Races, Hill-Climbs, Etc.

- Sept. 19-26....—Kansas City, Mo., Eight-day Reliability Run, Automobile Club of Kansas City.
- Sept. 23-24....—Boston to White Mountains and Return, 24-Hour Endurance Run, Bay State Automobile Club.
- Oct. 1-2....—Indianapolis Two-day Reliability Run to French Lick Springs and Return, Indianapolis Automobile Trade Association.
- Oct. 3....—Morristown, Madison, Chatham, N. J., Automobile Carnival and "Tour Around the World," under Y. M. C. A. auspices.
- Oct. 6-9....—Chicago, 1,000-Mile Reliability Run, Chicago Motor Club.
- Oct. 7-9....—Cleveland, O., Three-day Reliability Run of the Cleveland Automobile Club.
- Oct. 17....—Hartford, Conn., Hill Climb, Automobile Club of Hartford. (Probable Course, Avon Mountain.)
- Oct. 24....—Vanderbilt Cup Race, Long Island Course, auspices of Vanderbilt Cup Commission.
- Nov. 26....—Savannah, Ga., Grand Prize Race, Savannah Automobile Club.

FOREIGN.**Shows.**

- Sept. 24-Oct. 4.—Bourges, France, International Exhibition for Agricultural Motors.
- Oct. 11-18....—Paris, International Congress and Public Exhibition on Roads and Road Making for Modern Locomotion, French Ministry of Public Works.
- Nov. 28-Dec. 13—Paris, Eleventh Annual Salon de l'Automobile, Grand Palais, Automobile Club of France (Pleasure Vehicles, etc.)
- Dec. 20-28....—London, Stanley Show, Agricultural Hall.
- Dec. 22-29....—Paris, Eleventh Annual Salon de l'Automobile. (Commercial Vehicles, etc.)
- Jan. 16-25....—Brussels, Show Organized by Belgian Chamber Syndicate, Palais du Cinquantenaire.

Races, Hill-Climbs, Etc.

- Sept. 10-13....—France, near Compiegne, Coupe des Voiturettes, organized by L'Auto.
- September....—Paris, Vichy Aeroplane Competition, \$4,000 Prizes, Aero Club of France.
- Sept. 23....—Isle of Man, Race for the "Graphic" Trophy.
- Sept. 24....—Isle of Man, "Four-Inch" Race for the "Graphic" Trophy.
- Oct. 2....—France, Gaillon Hill Climb.
- Oct. 11....—Berlin, Germany, Gordon Bennett Balloon Race, Aeronautical Club of Berlin.

A RACE MEET IN CHADWICK-TOWN.

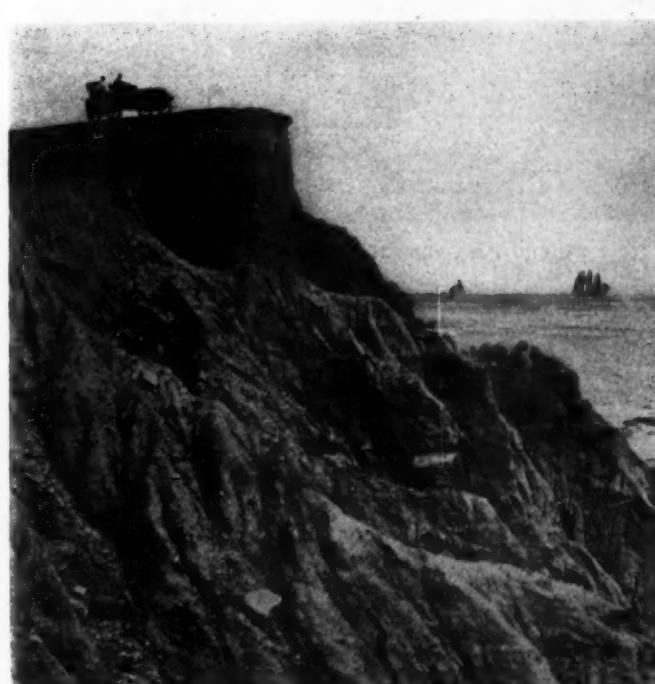
POTTSTOWN, PA., Sept. 7.—I. C. Winford and W. H. Shields, Philadelphia newspaper men, have been granted a sanction for a series of races on the mile trotting track here, to take place on the afternoon of Saturday, October 3. The main event on the program will be a 100-mile race, in which it is expected new track figures will be created for the distance. As this town is now the home of the Chadwick car, it is expected that Willie Houpert will take advantage of the opportunity to give his Vanderbilt candidate a thorough try-out.



Lighthouse That Warns the Mariner at Montauk Point.



The Lonely Road Across the Meadows to the Light.



Where the Headland of Montauk Point Meets the Sea.

TO MONTAUK POINT AND RETURN.

By PATHFINDER.

How many tourists, residing in Greater New York, have explored Long Island from end to end? Fewer, I will wager, than have visited the White Mountains, the Maine woods or the Adirondack region. The reason is not far to seek—we New Yorkers have a habit, when we wish to go sightseeing, of journeying far afield and neglecting the wonderful things which are at our very doors. For my part, I must confess that, until last week, I had never been further east on Long Island than Southampton, and I certainly would not have thought of taking such a trip as that which I am about to describe had not the promoters of the "Mechanical Efficiency Contest," to be held by the New York Automobile Trade Association, asked me to lay out a route to Montauk Point and return.

Leaving Columbus Circle (which is to be the starting point of the contest), we journeyed in our 30-horsepower White steamer to the country house of the Crescent Athletic Club, on the Shore road at Bay Ridge. This is the point on Long Island which is farthest west and it has very appropriately been selected as the place where the contestants will begin to travel on a schedule. Continuing to Bensonhurst, we turned from Twenty-second avenue into Kings highway, which is one of the oldest thoroughfares on Long Island. It winds in and out to Gravesend, then over towards Sheepshead Bay and through the old Dutch settlement of Flatlands. There are a number of old houses on this road which date back to Colonial times. Then we get back to the activities of to-day as we reach the Eastern Parkway and travel by the usual route to the great Merrick Road, which we follow through Lynbrook, Rockville Center, Freeport, Massapequa and Amityville to Babylon. Then, continuing straight along this same road, now called the Southern boulevard, we pass the magnificent estates which line the shore of Great South Bay—through Bay Shore, Islip, Oakdale, Bayport and Blue Point to Patchogue. Now we have reached the great Long Island "Summer boarder district," and we pass quickly through Bellport, Brookhaven and the Moriches to Quogue. Then we come to Good Ground and the famous Shinnecock Hills and finally to Southampton, where again we see many magnificent country estates. Then, after passing through a few more towns, the names of which end in -hampton, we reach Amagansett. Up to this point the greater part of the going has been over fine macadam roads, with hardly a suggestion of a grade. We have also noted with pleasure that the custom of oiling the roads is well-nigh universal in this section. But east of Amagansett we get something very different—not only a different style of road but different vegetation, different topography and different scenery from anything we have ever seen before on our travels.

The twenty miles of country from Amagansett to Montauk Point is made up of sand dunes. For miles at a time one does not see any vegetation except a sort of rank, stubby grass. There is no road in the usual sense of the term. The wagons, traveling in the same ruts, have worn a well-defined path and no one need have fear of losing the way. In some places the going is rather heavy and in spots it might even be called swampy, but certainly there is no obstacle which can bar the progress of a good touring car. It is about time to put an end to the myth that "the road beyond Amagansett is practically impassable." As for our White steamer, it plows through the sand and up the short grades with no more apparent effort than when on a macadam road.

There can be no question but that the eastern end of the island is very desolate. Not a habitation is seen and no wagons are met with along the route. Occasionally the road, or to speak more accurately, the trail, approaches close to the edge of the crumbling sand cliffs and we see and hear the waves breaking upon the shore, 40 to 60 feet below our feet. Let nothing more be said about "the waves washing over the road." Possibly a tidal wave would do so, but not the kind that ordinarily corrugate the surface of the broad Atlantic.

The first building we see after leaving Amagansett is the U. S.

life-saving station, five miles from the town. We proceed an equal distance and then pass another life-saving station. Evidently this is a dangerous section of the coast for the mariner. Now our road bears away from the shore and we skirt the edges of a fresh water pond. Then Montauk Inn comes into view and, after a stiff quarter-mile climb, we alight at this delightful hostelry.

From this vantage point a splendid view of the surrounding country is presented. In the very desolateness of it all, there is something akin to grandeur. But those sandy hills were not always bare. Ten years ago, at the time of the Spanish War, somebody blundered and ordered some 20,000 soldiers to pitch their tents here—in a delightfully healthy climate, to be sure, but there was no barrier between these valiant men and starvation, except a single-track railroad. Finally, as we all know, everything was straightened out, but not until a third or more of the men were in the hospital tents. The dwellers in the little settlement on the shores of Fort Pond bay, a half mile from the inn, will tell you all about the scenes of a decade ago—but the subject is not a pleasant one to pursue further. Besides, no one is supposed to discuss any phases of war, except its "glories."

The settlement of Montauk, where the inn is located, is at the end of the railroad, but not at the end of the island. We have a journey of 6 1-2 miles across the dunes before we reach Montauk Point, on the very extremity of which is the lighthouse. Here we are greeted by the keeper, Capt. Scott, who has been "on the job" for 23 years. He looks over our machine critically and remarks, "They certainly make fine automobiles nowadays. I s'pose people will soon be traveling here in airships." "May Heaven help them if they do not make a landing here," we reply, gazing out toward Europe.

Retracing Our Steps to the Metropolis.

From Montauk Point we retraced our way across the dunes to Amagansett and then along the Southern boulevard to Good Ground. Here we turned off to the north and made our way through Riverhead to Wading River, where the sound comes into view. The topography of the north shore of Long Island is so different from that of the south shore that one can hardly believe that only a scant six to twelve miles separates the two coast-lines. While the south shore is as flat as the prairies, the north shore has all the characteristics of a mountainous region, which means that the road leads constantly up and down hill and some of the grades, it might be said, require a wide-open throttle, even on our car.

On we go through Port Jefferson, Setauket, Stony Brook, and Smithtown. Then we pass through the grounds of the great State institutions at Kings Park where maniacs are confined—all except speed-maniacs, most of whom are still at large.

Then we go through Northport, Huntington and Oyster Bay. Just as we are leaving the latter town, we catch a glimpse of President Roosevelt and Mrs. Roosevelt as they whirl by us in one of the government White steamers. We toot our horn uproariously and the President acknowledges this "automobile salute" by tipping his hat. Then after passing through Glen Cove and Sea Cliff we come to Roslyn and Manhasset, of Vanderbilt race fame. Keeping straight ahead on Broadway, we continue into Flushing where, in the two-day contest of next week, the contesting cars will check in for the last time and will then proceed on whatever schedule they may desire to the finishing point at Columbus Circle. It is a safe prediction that all who take part in the run, even the veterans of the A. A. A. tours, will describe the 300-mile journey as the most interesting and picturesque two-day trip of their experience.

Prince Henry of Prussia is very content with the proposal to wind up next year's race in South Germany and to hold the speed trial on the flat in Forstenried Park, near Munich. It is quite likely that Austrian territory will be taken in as well. This race is now the principal event on the German automobile calendar, and is fast assuming international importance.



Spending Some of the Fifty Millions of State Road Money.



Stretch of Completed New State Road Near Blue Point.



Tourists Will Pass "Idle Hour."—W. K. Vanderbilt's Place.



Where the Road Circles Round Fort Pond at Montauk.

WILKES-BARRE IS AN ACTIVE AUTOMOBILING CENTER

By F. S. SLY, TRAVELING CORRESPONDENT OF THE AUTOMOBILE.

WILKES-BARRE, Pa., Aug. 31.—This city may easily be put down as one of Pennsylvania's chief centers of autoing, for, considering its size and situation, it is really ahead of Philadelphia on the east, or Pittsburg on the west, where live interest in automobiling is concerned. Much of this is naturally due to the Wilkes-Barre Automobile Club, of which George F. Lee is president, Peter A. Meixell, vice-president, and Dr. E. C. Wagner, secretary and treasurer, as there are few more progressive organizations of its kind to be found anywhere in the country. It now has 150 members and is doing a great deal of good work.

The plant of the Matheson Motor Car Company being located in this city also serves to keep the automobile and its interests constantly before the public, as the numerous testing cars from the factory are constantly on the go and always in evidence.

But interest is not confined entirely to the pleasure car, as on June 29 last the Wilkes-Barre Motor Transit Company started a stage line making a round trip of 3.1 miles in the city, the distance being covered in 30 minutes. The equipment consists of three Manhattan, 50-horsepower chassis, built by the Mack Brothers Company, Allentown, Pa. They have a four-cylinder vertical motor, equipped with a Breeze carburetor and a Splitdorf magneto, and fitted with a special type of 'bus body in which the entrance is at the front, so that the passenger has to deposit his fare in a special receptacle in close view of the driver. Two of the cars are kept on a 15-minute service, while the third is maintained in reserve for emergency purposes, as well to permit of an increase of the service in rush hours, such as on Saturday night. On Sundays only church trips are made. The fare is five cents each way, and the record for a single trip is 34 passengers, while the average day's travel ranges from 200 to 375 passengers per car. The cars seat 16 passengers comfortably. It was originally intended to employ electric lights, using storage batteries as the source of current, but this did not prove entirely satisfactory.

Generally speaking, the roads in this part of the State are bad; without making exceptions, it would be difficult to truthfully characterize them otherwise. At present, the best roads, and, likewise, the favorite drives of autoists in this section, are to Harvey's Lake, over Pocono Mountain, the middle road to Aspen, and to Newport Mountain. There is now under construction a State road running from Nanticoke to Wilkes-Barre, and this will

serve to increase the available mileage open to autoists in this section by a considerable stretch of fine highway.

There are now four good garages here and quite a number of well-known cars are represented. The Wyoming Valley Motor Car Company handles the Locomobile and Buick; Ford is represented by an exclusive agency, also maintaining a garage. Robert Johnson represents the Rambler, Mitchell, and Knox; and William Lee has the Oldsmobile, each one of these concerns maintaining an up-to-date garage.

Anthracite Districts Have Few Good Roads.

SCRANTON, Pa., Aug. 31.—Roads in this section of Pennsylvania are very poor, with the exception of a single toll road on which 35 cents is charged, and the private roads of the Scranton Gas and Water Company, leading from the toll road to the various reservoirs of the company back in the mountains. These are remarkably well-kept stretches of macadam and constitute the favorite drives hereabouts, being crowded on Sunday afternoons.

Interest in automobiling is active, the Scranton Automobile Association, which was only organized last spring, now having 125 members on its roll out of a possible 350, which represents the approximate number of cars in use in the city and vicinity. The officers are: President, H. B. Ware; Vice-President, George B. Jermyn; Secretary and Treasurer, Hugh B. Andrews. The organization is a live one and keeps its existence constantly in the public eye by the use of a small club flag which is displayed on the cars of all the members. The number of these that are always in evidence round town makes the membership of the club apparently much greater than it is.

Quite a number of well-known American cars are represented here, and while dealers report that business has been fair all along, it is the opinion of the majority that it does not average up to what it was at the corresponding period of last year. The Thomas is represented by the A. R. Gould Wagon Company; Conrad Brothers handle the Ford, Premier, Reo, and Aerocar; and the Standard Motor Car Company represents the Pierce-Arrow and the Autocar, both the last-named concerns maintaining garages. A third is run by the Scranton Garage and Motor Company, which also handles the Franklin and the Buick.

QUESTION OF WEIGHT IN THE BUILDING OF AUTOMOBILES

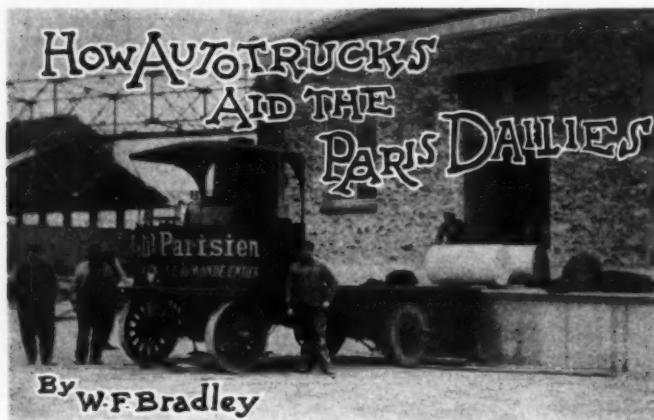
By CHARLES CLIFTON, GEORGE N. PIERCE COMPANY, BUFFALO, N. Y.

THE Glidden and Hower runs, which have now gone into history, certainly justified the weight which we put into our chassis. We had no structural trouble of any kind. Our cars certainly ran every other car to the breaking point, covered more miles than any other, and were in shape to repeat the performance. Almost every car competing with us in this country has more or less rear axle trouble. We have practically none. Almost every car in the market has spring trouble, while we have practically none. Now, these results are not accomplished by light weight construction, or by cheap construction, and all these results can only be obtained by putting in weight intelligently.

If you will look over modern rolling stock in other lines, and other mechanical devices, calculated for long and strenuous use, you will observe practically as follows: All railroad equipment has been very much increased in weight. The pressed steel car, which is the most modern of its sort, is heavier and more expensive than the old wooden car, but it is more economical because of its longer life and less liability to accident. Take the experience of the Pullman Company with their cars. They have developed them along the same line that we have; namely, by watching them in the repair shop, and as the result of accidents,

and the result is that the public is now satisfied to pay what the Pullman Company asks, if for no other reason than because the liability to personal injury in the Pullman car is practically nil. Looking also to the locomotive practice of to-day, where no effort is made to get light weight, but that service is the main consideration. This is the same in the development of electrical machinery. The cheap thing has no place in that line. These machines are built substantially for long and satisfactory use, all of which means weight, careful workmanship and the very best of material.

If you will look over the history of the motor car business for the past ten years, I think one fact will stand out preeminent; namely, that in all competition, at all times, and under all conditions, there is one great foreign concern that has always held its own where others have had meteoric periods of brilliancy. This one concern has gone on in its quiet way building a heavy car, but always holding its own from year to year, and increasing its business, until it is one of the largest if not the largest producer in the world. I refer by this to the Panhard. This car, with equal power, is a heavier car than ours, but no one can gainsay its position in the trade.



By W.F. Bradley

Loading Up a Truck at the Door of the Paper Mill.

PARIS, Sept. 3.—Supplying an important daily newspaper with reels of white paper is an operation requiring as much regularity and as much dispatch as the supplying of the same paper, printed and folded, to newsdealer and reader. The capacity of modern rotary presses is enormous, so large, indeed, that the manager of many a city daily is sore pressed for space in which to store the huge rolls which later will be impressed with the news of the day. Floor space is generally limited, for rents are high in the neighborhoods in which daily newspaper offices are obliged to locate; the paper mill is usually miles away, for economy demands that trees shall be transformed into newspaper near the source of supply where water is plentiful, and where rents are low. Hence the necessity for frequent renewals of the long reels of white paper which furnish news for the millions under the touch of the rotary press.

In Paris the difficulty of supplying the printing presses with stocks of white paper is keener than in most capitals, not because the journals are larger, but because they are housed in cramped quarters, offering little room for reserve supplies. Circulations have increased, but the walls of the printing office have remained as before, with the result that now a daily supply is needed from the paper mill to keep the presses running. There is further complication from the fact that the printing offices are all around the most crowded portion of the main boulevards and are reached with difficulty by heavy horse teams. In bad weather, under the old system, the foreman printer was often on tenter-hooks regarding the next supply of paper; it only needed a frozen pavement or a lame horse to seriously jeopardize the success of the next edition.

The outcome was the introduction of the automobile performing regular daily services between the mills and the newspaper offices, and the almost entire abolition of the horse. At the present time all the more important dailies, such as the *Petit Parisien*, *Le Journal*, *Le Matin* and *Petit Journal* receive their supplies of blank paper daily and exclusively by automobile. As the papers mentioned, together with their auxiliaries, comprise all the most important dailies, having combined circulations running into many millions, the morning delivery van has become as standard as the milkman's cart on the main boulevards.

Nine-tenths of the paper for the Parisian dailies is supplied from mills at Nanterre, ten miles out of town. By horse traction this meant a journey of three hours, the road being a varied one of good granite paving, bad ditto, moderate macadam, a few hills, and crowded wood-paved boulevards. Taking six rolls as the maximum load for a two-horse team, this required eight different journeys for the delivery of the daily supply of any of the more important papers.

By automobile eleven to thirteen rolls are carried at once, the total weight being from 5 to 6 tons, the distance is covered in one hour and a half, and the return is made within the hour. Taking the *Petit Parisien* as one of the most representative of the Parisian dailies, the first load leaves the mills at 5 a. m., loading having taken place the previous day, and the rolls

are deposited at the door of the press room 90 minutes later. Thirty minutes after the departure of the first vehicle a second is ready to start, the service being continuous all day at intervals of half an hour. For the return the automobile trucks are if not empty, at least light, for all that has to be sent back are the returns and waste paper.

Although some of the larger papers own and maintain their own fleets of trucks, a co-operative system is adopted by the others, while many more are supplied by the manufacturer at a fixed inclusive rental, with a number of journeys guaranteed.

On an average the inclusive cost of transportation under this system works out at rather less than \$9 per day, each vehicle making a maximum of three journeys per day and carrying a total of 15 to 18 tons of paper, exclusive of the waste returned to the factory. All the vehicles in use are Purrey steamers, with their engine forward, and driven by side chains to the rear wheels. Rubber tires are not used, all wheels, both front and rear, being shod with steel bands.

The cost of a vehicle of this type, complete with flat body for carrying rolls of paper, is about \$3,000. As the useful life of such a truck is ten years, the average amount to be written off for depreciation is \$300; interest on capital invested, at the rate of 5 per cent, is responsible on an average for \$80 per year; various insurances, automobile and drivers' licenses take \$100 per annum; maintenance and repairs work out at the rate of \$350 per annum. This makes a total of \$830 per annum, which at the rate of 250 working days per year gives a daily cost of \$3.35 per vehicle per day. Running expenses are:

Driver	\$1.50
Coke, 4 cwt. per day	2.50
Oil, grease, firing, waste	0.80
Water	0.25
	<hr/>
Maintenance, interest, etc.	\$5.05
	<hr/>
Total per day	\$8.40

Apart from the economic value of automobile over horse traction for a service of this nature, there is an important public value by lessened congestion on the city's streets. On the first portion of the journey a speed of ten miles an hour can be maintained; on the hills this is cut down to six miles an hour, and later in the crowded portions of the city, and at certain hours, has to be reduced to a crawl of three miles an hour. Under all conditions, however, the five and six-ton trucks are capable of keeping pace with the stream of horse traffic on the boulevards, the disturbance which was formerly caused by the two-horse teams—and is still caused by the smaller papers maintaining horse service—being conspicuously absent with the automobile service. In cities such as Paris and London, where street traffic is particularly dense, heavy horse teams are becoming more and more of an obstruction. So pronounced is the difference between the two systems of haulage that the closing of more important highways to the heaviest and slowest horse vehicles is already proposed.



Unloading Paper at the Press of a Paris Daily.

PROBLEM UNSOLVED: IDEAL ROAD FOR HEAVY MOTOR TRAFFIC

PARIS, Sept. 4.—Most important of the questions to be discussed at the international road conference which the French Government has called for October 11 to 18, in Paris, is the construction of the ideal road for heavy motor traffic. Though macadam with some anti-dust preparation will doubtless remain as the type of road for country highways, European experts are more and more of opinion that something more resisting will have to be employed for the main roads in the neighborhood of cities or on any highway having a large amount of traffic.

M. Chaix, the president of the Touring Committee of the A. C. F., is one of many in favor of a scheme of road construction consisting of a bed of cement five to seven inches in thickness, covered over with a layer of sand, then paved with smooth rectangular granite blocks, the interstices being covered with asphalt. A road on this system has been built in the neighborhood of Suresnes, in the suburbs of Paris, and although subject to very heavy traffic has remained in perfect condition. Such a road is naturally expensive to construct, and for a long time will never be regarded as other than a road de luxe. Its efficiency, however, is beyond question and has been so well proved that an extensive scheme is now on foot in the district to the north of Paris for the pulling up of the old, roughly laid granite blocks to be replaced by smooth ones on a bed of cement.

Though this type of road would doubtless be the ideal for automobiles, in the opinion of Dr. Guglielminetti, the secretary

of the anti-dust league, it can never be very extensively adopted on account of its cost and the ill effects it has on horses. Though a fervent automobilist, Dr. Guglielminetti believes that the horse will be an important element on the main roads for a number of years and that some consideration should be had for his comfort. Asphalt, in the opinion of the anti-dust expert, would be more satisfactory than granite paving, for it produces neither dust nor mud, is silent and is easily and quickly repaired. The objection usually levied against asphalt that it is slippery in slightly wet weather is not a serious one, for there are methods of asphalting which entirely overcome this. This process is also more costly than macadam, the price of the latter in France being about \$6,000 per kilometer, compared with \$26,000 for a wood paved or asphalt road.

While the annual overhauling of Paris streets has been going on this summer it has been noticed that the portion of the Champs-Elysees reserved exclusively to automobiles was in excellent condition, while the side portions, used by horses alone, had been torn into strips until it was a mass of holes. The effect of the rubber tires was to wear the wood blocks equally smooth. The drippings of oil from the cars acted as a preservative, the remarkable result being that while the blocks used by horses could be torn out by a slight blow from the crowbar, the blocks that had never been pounded by a hoof were so hard that it was only with difficulty they were torn out of their bed.

NEW JERSEY GOVERNOR FAVORS GREAT OCEAN BOULEVARD

AT a banquet given him last Thursday night by prominent summer residents of the Northern New Jersey coast resorts at the West End Cottages, Long Branch, Governor J. Franklin Fort outlined a system of highways to be built and maintained by the State that, if carried out, will raise still higher New Jersey's good roads banner among those of her sister States.

First of all, Governor Fort proposed a great boulevard to extend for a distance of 127 miles along the ocean front, from Atlantic Highlands to Cape May. He said that for a considerable portion of the proposed route there were already fine gravel roads, and declared that by widening them and constructing the connecting stretches the proposed boulevard could be built at a cost of \$300,000. The entire work could be completed in two years and much of it be ready for use by next season, provided the legislature made the appropriation at its next session.

In the opinion of the Governor the legislature could easily be persuaded to make the required appropriation were the co-operation of the inland counties secured. This he was confident could be obtained by including in the ocean boulevard project a scheme for connecting all the county seats by State highways.

This would result in a system which would give 500 miles of roads built and operated by the State.

The cost of the annual maintenance of such a system would be but \$300 per mile, or a total of \$150,000.

In the course of his comprehensive speech Governor Fort touched upon New Jersey's present motor vehicle law. He declared frankly that the automobile had come to stay, and that the automobilist must be reckoned with and treated with reason by the legislature in its laws. The Governor then made the radical suggestion that the Governors of the State of Connecticut, New York, Pennsylvania, Delaware, and Maryland appoint commissioners to meet commissioners appointed by himself to discuss this whole question of automobile legislation and make recommendations for uniform laws on the subject a common-sense proposition that elicited enthusiastic applause from the seventy-five banqueters.

The chairman of the banquet, Jefferson Seligman, twitted the Governor on his recent speed-trap adventure. Speeches were made by Gen. J. J. McCook, Judge Wilbur A. Heisley, Isador Straus, Justice Victor J. Dowling and W. E. D. Stokes.

INSTRUCTIVE PROGRAM FOR GOOD ROADS CONVENTION

NEWARK, N. J., Sept. 7.—Announcement is made of the tentative program arranged for the two-days' session of the Good Roads' Convention at Atlantic City, September 25 and 26, by the Associated Automobile Clubs of New Jersey and the New Jersey Grange. There will be four sessions, one in the morning and another in the evening of each day. The evenings will be given up to the entertainment of the delegates and their friends by the Atlantic City Automobile Club.

The first session, that on Friday morning, will take up the general subject, "Good Roads." Among the points to be discussed under this heading are: "New Jersey Highways," "Good Roads from the Granger's Standpoint," "The Standpoint of the Dweller Along the Way," and "From the Automobilists' Point of

View." Invitations have been sent out to speakers of note, and it is almost certain that favorable replies will be received in practically every case. The presence of Governor Fort is assured.

The second day will be given over to the consideration of the subject of road construction. Road authorities from this and other States will present papers based upon their personal experience in roads building. It is hoped that a demonstration of road-making machinery and dust-laying devices can be given in connection with the second day's sessions.

From the program as mapped out, this, like all such conventions, will go far to help the "good roads" problem and in addition will do a great deal to bring about a better understanding between the farmer and the automobilist.

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THE DANGER OF NEGLECTED ROADS.

Hardly a day passes that does not give the newspapers an opportunity to record another serious, often fatal, "automobile accident." Of course, those who understand the conditions can usually see just how far the automobile was responsible in each case; but among less informed people these incessant reports are strengthening the belief that the average automobilist belongs to the same class as the parachute jumper and the "wild, death-defying" circus performer. Why some of our ordinarily responsible and clear-sighted papers think it worth while to foster this opinion for the sake of a little cheap sensation-mongering is rather hard to understand. However, the Toledo, O., *News-Bee* has the courage of its convictions, and it is convinced that "speed mania" is not always to blame. The case in point is the accident in which the Rev. George Vahey and Charles W. Pohlmann were killed, about a month ago, near Sylvania, O. The *News-Bee* quotes from Coroner Faber's verdict:

"The evidence brought out at the inquest convinces me that the road where the accident occurred was in dire need of repair, and that this is true in many other sections of the country. It shows conclusively that roads in general are not given the attention they should receive in view of the extensive automobile traffic nowadays. In a word, township trustees and county officials have not kept pace with the times. The accident was directly due to the fact that the chauffeur lost his way. The law pro-

vides that guide posts be erected at road intersections, but it is generally disregarded. Had there been a guide post at the point where the chauffeur turned upon the wrong road the accident would have been avoided."

This is plain speaking with a vengeance. But there are two facts which cannot be denied: First, that roads are made for the people who use them, and, second, that a large and constantly increasing proportion of road users are automobilists. Therefore, roads should be adapted for automobile traffic.

No one denies that some automobilists use the roads improperly, and this element figures largely in the accident list. But the evidence at Coroner Faber's inquest showed that the Rev. Vahey and Mr. Pohlmann were traveling at a reasonable speed. The road was simply a death-trap, and the county officials responsible for its condition should be held guilty of criminal negligence, at least. They are nearly on a level with the men who equip excursion boats with fraudulent life-preservers and put rotten fire-escapes on their tenement houses.

Nevertheless, it might be timely to reiterate a fact which is daily becoming more self-evident, and that is, that automobilists themselves must assist in bringing about a reformation of their own black sheep, who are really responsible for the spread-heading of all automobile stories which have even the semblance of an accident.



SOME EXTERNAL IMPROVEMENTS.

Improvements in the external appearance of an automobile, although of course not so important as improvements in its mechanism, still have—and rightly—a considerable influence on its success. Most buyers take for granted that the various makes of cars they are considering will run and give reasonable satisfaction, and this being the case, they are apt to give more attention to the esthetic side. Surely a man cannot be blamed for preferring a neat, well-proportioned, clean-cut car to a clumsy, heavy-looking one, with odds and ends of the mechanism hanging out at unexpected places; and he will usually find that the designer who has been careful of the exterior of his car has been careful of the interior as well.

The most marked improvement has been effected on the dashboard. Once upon a time people used to talk of a "well-filled" dash, the equipment of which might be inventoried as follows: ten oil-sight feeds (more or less); one large oil cup; one hand oil pump; two or three oil cocks, for various purposes, and several yards of pipe; one water pressure gauge; one air pressure gauge; one hand air pump; some more cocks; auxiliary air lever; ignition cut-out button, and perhaps some more. When the proud owner had added a speedometer, odometer, and clock, the result was indeed wonderful to contemplate.

But nowadays most makers limit themselves to the sparkcoil and switch, encased in a polished box to match the dash; a neat row of sight feeds may be permitted, and perhaps an auxiliary air lever, but that is all. Mud pans are now universal, and many cars have sheet-metal aprons between frame and running boards, concealing the unsightly exhaust pipe and muffler. Bodies are not only more comfortable and convenient, but their designs and coloring are in better taste. And these small improvements have done a great deal toward bringing the automobile into public favor.

LICENSED ASSOCIATION MANAGERS MEET.

The all-day session of the board of managers of the Association of Licensed Automobile Manufacturers, held in New York last week, had for the most part to do with the Madison Square Garden show matters. Much enthusiasm was evoked by the scheme of decoration adopted by the show committee as explained by Col. George Pope, its chairman. A magnificent triumphal arch is to be a conspicuous feature. There will be a new sign scheme, which will not only be more convenient to the public, but also enhance the beauty of the background. The structural arrangements will provide much additional floor space and a more effective ensemble as well. Space allotments for the show were made, but as usual not made public.

The resignation of Harry T. Clinton, head of the agency and publicity departments, was presented and accepted. In future E. P. Chalfant, assistant general manager, will have charge of the agency department, and Coker F. Clarkson, secretary of the mechanical branch, will look after the publicity.

It was announced that the recent aggressive policy of the association prohibiting dealers from handling unlicensed cars met with full support and will be continued with rigid enforcement. The committee in charge of the 1909 edition of the "Hand Book of Gasoline Automobiles"—which is the sixth of the series, reported progress. Members represented were:

The Autocar Company, Marcus I. Brock; Buick Motor Company, W. C. Durant; Cadillac Motor Car Company, W. C. Leland; Corbin Motor Vehicle Corporation, M. S. Hart; Chalmers-Detroit Motor Company, R. D. Chapin; Electric Vehicle Company, H. W. Nuckolls; Elmore Manufacturing Company, J. H. Becker; H. H. Franklin Manufacturing Company, G. H. Stilwell; Hewitt Motor Company, E. R. Hewitt; R. C. Gildersleeve; Locomobile Company of America, S. T. Davis, Jr., A. W. Robinson; Lozier Motor Company, H. A. Lozier, Jr.; Matheson Motor Car Company, C. W. Matheson; Northern Motor Car Company, V. M. Gunderson; Packard Motor Car Company, H. B. Joy, M. J. Budlong; Peerless Motor Car Company, L. H. Kittridge; George N. Pierce Company, Charles Clifton; Pope Manufacturing Company, C. E. Walker; Pope Motor Car Company, George Pope; Royal Motor Car Company, E. D. Shurmer; Selden Motor Vehicle Company, R. H. Salmons; F. B. Sterns Company, F. B. Stearns; Stevens-Duryea Company, C. C. Hilderbrand; Studebaker Automobile Company, W. E. Metzger; E. R. Thomas Motor Company, E. R. Thomas; Waltham Manufacturing Company, E. S. Church, O. G. Bechtel; Winton Motor Carriage Company, Thomas Henderson, E. P. Chalfant, assistant general manager.

HERE'S A GOOD KIND OF LOCAL SHOW.

HARTFORD, CONN., Sept. 7.—The show held under the auspices of the Hartford Automobile Dealers' Association at Charter Oak Park in connection with the grand circuit horse races and the Connecticut State fair was accorded an auspicious opening to-day. The weather was simply perfect and the crowd all that could be desired. Without the gates (no cars being permitted within the enclosure) were hundreds of cars neatly parked. The attraction is housed under the roof of the huge skating rink.

The various exhibitors have made good use of their space and many of the displays are very attractive. The Miner Garage Company display the Knox and Buick, and though agents of the Pierce, a car of that make could not be secured for the opening. Brown, Thomson & Co. display the Packard "18" and "30," Stevens-Duryea four and six-cylinder cars, and the Cadillac. The Corbin cars are well shown up, and the Palace Automobile Station offers the Oldsmobile, Thomas new six and four, the Autocar, and the E. M. F. Robert Ashwell displays the air-cooled Franklin, and Dunbar & Mansir of Holyoke, Mass., show the two-cycle Elmore. The Legate Manufacturing display the two-cycle Atlas in touring runabout and taxicab models. A. W. Peard shows the Overland in four and six models.

The accessories are well displayed and those of Brown, Thomson & Company to excellent advantage. Interest naturally centers in the 1909 models, and the Packard "18," E. M. F., Knox, and six-cylinder Thomas are centers of attraction. The Elmer Automobile Company make an effective display of the six and four-cylinder Fords. The Electric Vehicle Company display the 29-horsepower Columbia gas model.

MINNESOTA AUTOISTS MAY HAVE HARD FIGHT.

MINNEAPOLIS, MINN., Sept. 7.—Minnesota autoists will have a hard legislative fight this year in the effort to revise the automobile laws of the State. There is a general demand for the re-establishment of the system of State registration and State licensing, which was abandoned two years ago, when the legislature passed a law authorizing cities and municipalities to license and number cars. The secretary of State, in his report this year, strongly urges a return to the old system.

The Minneapolis Automobile Club has a new scheme, however, upon which its members are uniting, and which they promise to fight for upon the opening of this Winter's legislative session. It is proposed to exempt the automobiles from all taxes under the personal property assessments, and to levy in lieu of such taxes a State registration fee of from \$5 to \$75, based on the power and weight of the machine. This fee it is proposed to use for road improvement, as a State and county fund. The plan has the support of the Minneapolis automobilists, but will undoubtedly meet some opposition.

Secretary of State Schmahl, in his annual report, says:

"In view of the repeated requests from residents of Minnesota, as well as from other States, for licenses to operate automobiles in Minnesota, I cannot too strongly recommend to your honorable body the enactment of a uniform law governing the licensing of automobiles in Minnesota.

"The license, in my opinion, should be issued by this department and a uniform fee of \$1.50 or \$2 per annum could be charged without injury to the owner, and with great benefit to the State. At the present time there is absolutely no uniformity in the numbering of machines; each municipality or township organization has its own system of numbering, and as a result a large number of machines operated in Minnesota have precisely the same number, which must necessarily work more or less inconvenience to police and other officers of the law seeking to ascertain the ownership of certain machines.

"This department is daily in receipt of requests from residents of the State, as well as foreign residents, for these licenses, and the provisions for a State license should be made at as early a date as possible by your honorable body. There are probably in the neighborhood of 10,000 automobiles in this State, and an annual license of \$1.50 for the operation of each machine would bring a fair return into the State treasury."

CONGRESSMAN JENKINS DEFEATED.

MILWAUKEE, WIS., Sept. 5.—Automobilists here are much interested in the results of the primary elections, of which the most surprising development was the defeat of Congressman John J. Jenkins by Irvine L. Lenroot. Congressman Jenkins was chairman of the Judiciary Committee of the House during the last Congress, and it was before his committee that Thaddeus Terry, chairman of the A. A. A. Legislative Board, made his argument for the Federal registration bill. The story of that argument is now ancient history; but it will be remembered that although Mr. Terry came forth with flying colors, having answered every objection and silenced every opponent, yet the bill which he championed was never reported. Congressman Jenkins was considered somewhat obstinate in the premises, and automobilists opposed his reelection. Now it looks as though they may have held the balance of power.

HONORING THE ROUND-THE-WORLD WINNER.

PHILADELPHIA, Sept. 7.—Mounted upon a dais in the handsome salesrooms of the Bergdoll Motor Car Company, at Broad and Wood streets, the New York-to-Paris Thomas reposed in state for two days last week while thousands of local motor enthusiasts paid homage to the victorious car and its driver. On Thursday night the big banquet hall of the Hotel Walton was packed to suffocation by those anxious to hear Orrel A. Parker's illustrated lecture of the long race. After the lecture there was a banquet, at which Louis J. Bergdoll, Fred Vanderhoof, George T. Verfault, Driver George Schuster, and several others had a few words to say regarding the race. Henry L. Hornberger presided. The lecture and banquet were under the auspices of the Quaker City Motor Club.

CLUB DOINGS IN ACTIVE AUTO CENTERS

DRIVING PRECEPTS FOR SANE AUTOISTS.

CHICAGO, Sept. 7.—President Ira M. Cobe, of the Chicago Automobile Club, in the bulletin of that organization, gives the following excellent advice to automobilists to drive with due consideration to other users of the road:

Remember that greater liberty is enjoyed by automobilists in Chicago than in any other large city in the country. Rarely is an arrest made except in flagrant cases.

Always slow down before turning corners, and look to see that no machine is immediately behind you.

Never turn directly around in the street without warning.

Do not dart ahead of vehicles in crowded thoroughfares. A few seconds' gain is poor compensation for the risk run.

Remember that women and children are likely to do the wrong thing when danger threatens. It is better to slow down or stop than to depend upon your skill at dodging.

As between injuring a pedestrian and damaging the car, smash the machine every time.

To run away after an accident is to confess yourself a coward, and an unfit associate for gentlemen.

An automobile hits hard. A serious or fatal accident will spoil the sport for you for a lifetime. Let your motto be, "Safety first and speed afterward."

Drinking and driving should never be indulged in the same day. If you must drink, do your riding in a hack.

Finally, remember that, notwithstanding your car weighs 3,000 pounds, and a pedestrian 150, this is not a case where might makes right. Don't think that because you toot your horn it is necessarily up to the man on the street to do the jumping.

HERE IS A MODEL CONNECTICUT SIGN.

HARTFORD, CONN., Sept. 7.—The Connecticut Automobile Association is wide awake as to the practical needs of the motoring fraternity. Temporary signs will be erected immediately throughout the State wherever road improvements are being carried on. These signs will contain full road directions. Speaking of signs, that above the South Glastonbury post office meets all demands. The background is black and the letters are gold. The sign reads: "U. S. Post Office, South Glastonbury, town of Glastonbury, Hartford County, Conn., population 4,800, Hartford 9 miles, Middletown 9 miles." There one has the whole story briefly told with directions indicated. Vice-president Gillette of the Automobile Club of Hartford while secretary of the A. A. A. endeavored to have the government erect signs of this nature over its post offices throughout the country, but the contention at that time appears to have been that the federal government would not be benefited and the matter was allowed to drop. The sign above referred to can be seen from a distance.

Gilbert F. Heublein has returned from an extensive trip through the British Isles. Mr. Heublein dined the contest committee of the Automobile Club at the Heublein last evening. Mr. Heublein's daughter is the wife of Percy Martin, superintendent of the English Daimler factory, and during his stay toured with Mr. and Mrs. Martin.

TOUR OF THE MICHIGAN CLUBS.

DETROIT, MICH., Sept. 7.—Keen interest is being displayed by clubs all over the State in the tour of the Michigan State Automobile Association scheduled for September 24-26. From present indications not less than one hundred cars will take part in the three hundred-mile contest.

Flint motorists will join the Detroit delegation and make the start from here, reaching Grand Rapids on the 24th. That evening a banquet will be given in the Furniture City, and on the following morning all the different clubs will leave Grand Rapids for Detroit. This will complete the tour for Detroit and Flint, Battle Creek, Grand Rapids, Kalamazoo and other motorists being required to run back to Grand Rapids in order to cover the 300-mile course. Several valuable trophies in the way of cups are offered participants. The Michigan association, Edwin S. George, and S. D. Waldron are donors.

PENNSYLVANIA'S FEDERATION IS ALIVE.

PHILADELPHIA, Sept. 7.—On Friday morning next there will be held at the handsome home of the Automobile Club of Germantown a meeting of the executive committee of the Pennsylvania Motor Federation and the presidents of the various clubs affiliated with that organization to inaugurate a plan to bring about the passage at the next meeting of the State Legislature of new automobile and road laws.

President Robert P. Hooper, of this city, arranged the meeting, which will be held in the morning at 11 o'clock. The committee members and the club presidents will meet at the Union League and will be taken to the Germantowners' quarters in automobiles.

After listening to the reports of the various committee chairmen and the subsequent discussion, a plan of campaign will be decided upon, with the result that the various club representatives will return to their homes with well-defined ideas as to how to go unitedly to work throughout the State in an effort to bring about a betterment of motoring conditions generally. Those attending the meeting will be the guests of the Germantown club at luncheon.

A. C. OF PHILADELPHIA DOING EXCELLENT WORK

PHILADELPHIA, Sept. 7.—The Automobile Club of Philadelphia is particularly active these days and is accomplishing much for the general good of automobiling in the vicinity of this city. During August 317 warning signs of various kinds were placed by the Roads, Maps and Signs committee.

The membership committee reported the election of 29 new members. The report of the law and ordinance committee contains the following pertinent advice:

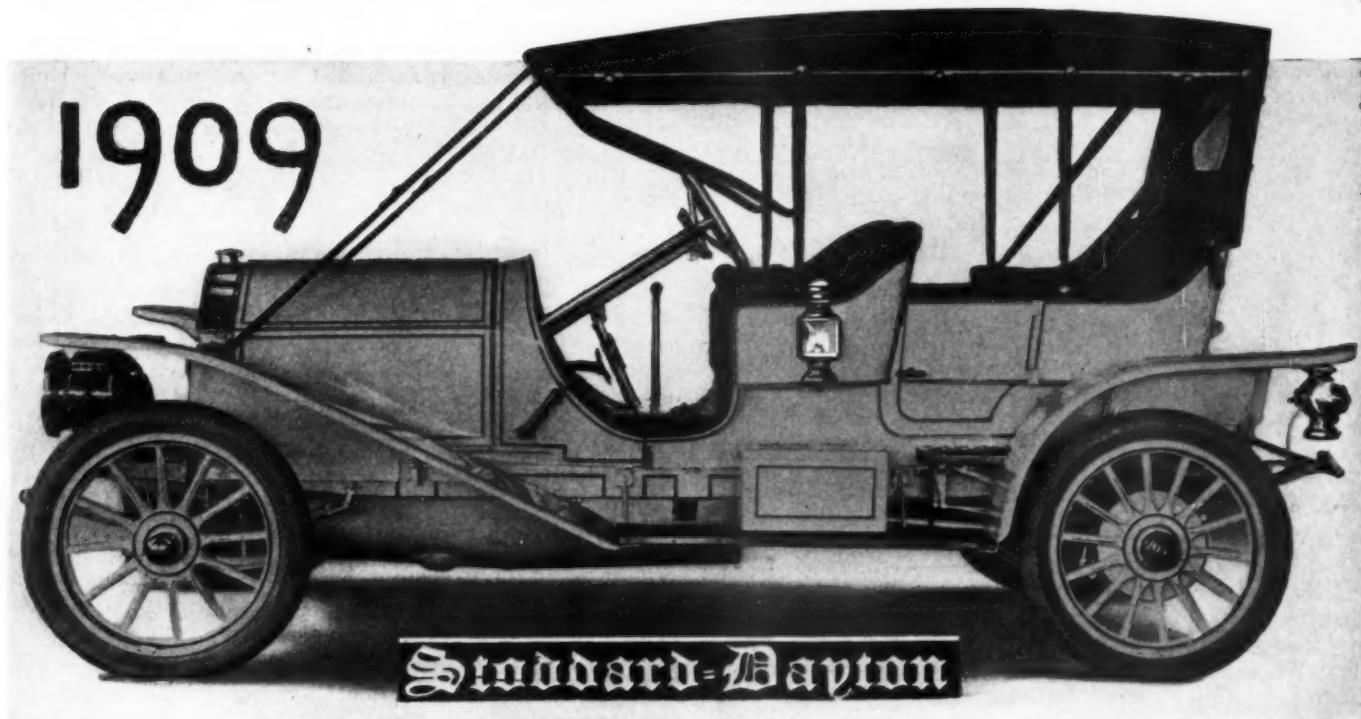
"Your Committee begs to call your attention to the fact that in order to secure fair treatment we must be fair to others upon the highway and use consideration in operating our machines. Public sentiment is without doubt beginning to concede that automobiles may be operated safely at a speed considerably in excess of that which may be permitted to horse-drawn vehicles.

"Every accident due to reckless or negligent driving retards the development of this idea, but we wish also to point out to you that discourtesy to drivers or riders of horses and pedestrians, because of its greater frequency, is almost as detrimental.

"Give others their fair share of the road, turn out in season, do not drive under a horse's nose, do not pass horse-drawn vehicles at an excessive rate of speed, and insist on your chauffeur's observing the same rules, and you will materially aid those who are working to secure the freedom of all motorists from annoying restrictions."

HARTFORD CLUB CLIMB, NOVEMBER 7.

HARTFORD, CONN., Sept. 5.—The contest committee of the Automobile Club of Hartford devoted nearly all of to-day scouring Hartford county for a good hill for the forthcoming climb. Two weeks ago it was decided to make use of Avon mountain, one of the hardest climbs anywhere in this State, up the side of a mountain in fact. At a meeting of the board of governors early in the week the matter of the climb was thoroughly thrashed out and it was deemed wise to conduct a still further search for a real hill. Accordingly grades in Newington, Griswoldville, and Glastonbury were inspected. One particularly stiff one was located at South Glastonbury, but it was considered inaccessible and the committee passed it. Another very promising slope was located on the Marlborough-Colchester road and this was much favored. The grade was tested and measured, and it was a toss-up between the Glastonbury hill and the Avon mountain course. Then the committee toured away out to Avon and tested out the hill. The first trial proved conclusively that the course at the last turn is a dangerous one, but after careful consideration it was decided that the Avon route will be the scene of the forthcoming event. The last turn will be banked to preclude the possibility of skidding.

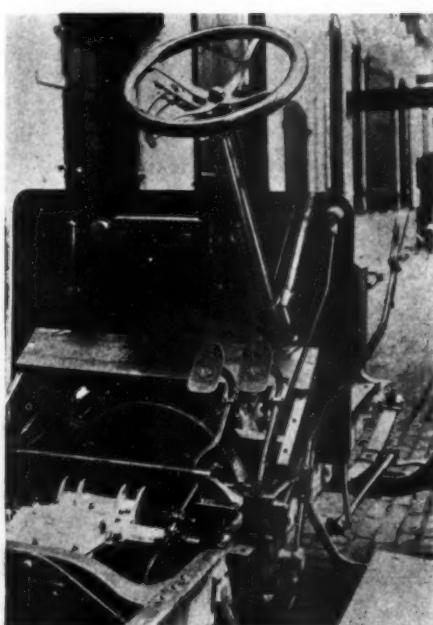


Model 9K of the 1909 Stoddard-Dayton Line, with Top and Detachable Tonneau, Which sells at \$2,700.

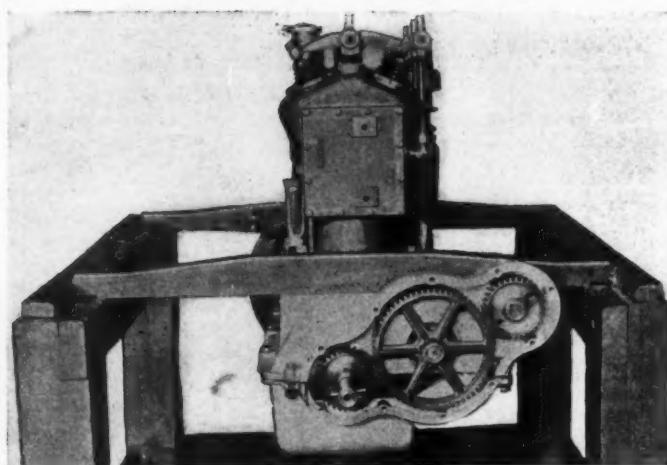
THE Dayton Motor Car Company, Dayton, O., since its inception in 1905 being a constant exponent of the medium-priced machine—the \$2,000-\$2,500 type—has, as if a leader in the forward march of price reduction, ready for next year three types of cars that embrace the \$1,500-\$2,500 manufacturing gamut, all of which are alike in chassis design, in the grade of material used and in the finish given, differing only in the size of parts to meet the demands for cars of different horsepower, different speed proclivities and different passenger carrying capacity.

Scarcely one of the 1908 Stoddard-Dayton principles have been discarded, but not a few of them have been amplified in minor details, all of which are footsteps in the path of evolution that the designer, Edwards, has been forging the car along since its inception. The valve-in-the-head motor with one rocker arm for the intake and exhaust valve of each cylinder remains unchanged; the contained crankcase lubrication shows detail modifications, the cone clutch with its leather facing is in place; so is the selective gearset; the shaft drive, and the double ignition system. In the list of alterations come the employment of integral water jackets for each cylinder pair, in place of the copper water jackets employed during this season. These new water jackets have large end plates secured by set screws with fiber gaskets between them and the cylinder walls, which plates allow of a simple twin casting and give good opportunity for removing core sand. Such jackets offer a simpler construction than copper. Locating of the fan pulley in rear of the half-time gear cover on the forward end of the motor has the advantage of not interfering with the removal of the aluminum plate forming the front of the gearcase and further eliminates the boring of the cover for the fan shaft extension which would give an opportunity for an oil leak at that point. A choice is given of four magnetos, two types of Bosch, Witherbee and U. & H., the latter a German product. The trans-

mission has been improved by locating the gear shift lever outside of the frame at the right, motor devotees recalling how heretofore it was located in the floor board inside of the frame member, a location used to avoid perforating the side member of the frame for the lever of the change speed shaft and the brake lever shaft. While the frame side member is now perforated it is strengthened by the presence of a semi-oval bracket bolted to the outside of the frame and which carries and entirely encloses the change speed lever's lower end as well as taking the sector for the emergency brake lever. The bracket is a mud and dust-proof affair, entirely enclosed at its lower end, the only opening in it being the slot in which the change speed lever operates. An improvement in the three-speed selective gearset is the lengthening of the bosses on the transmission case for carrying the Timken roller bearings as well as using chrome nickel steel for the propeller and rear axle drive shafts where nickel and high carbon steels were previously in vogue. The running gear has undergone several modifications all taking the nature of enlargements. The side members of the frames have been increased in vertical depth 1-2 inch and the horizontal webbs added to the extent of 1-2 inch; brake drums on the big car are made 14 inches in diameter, where 11 1-2 sufficed, and the width has been raised to 2 1-2 inches. The drums are steel stampings instead of malleable iron castings. Road wheels, while enlarged in diameter in the small car, have been increased in strength by the use of twelve and fourteen spokes in front and rear and increasing the spokes to 17-16 inches in width. The side strut rods from the frame members to the rear axle casings are now made with a bolt and eye connection at the frame instead of the ball-and-socket joint of previous seasons. The steering connections now pass over the front axle at the right front of the car instead of under the axle, a change used on the majority of the 1908 cars and which takes this most important member of the steering mechanism out of the reach of



Gearshaft Control, Outside of Frame.



Three Motor Gears Instead of Four This Year.

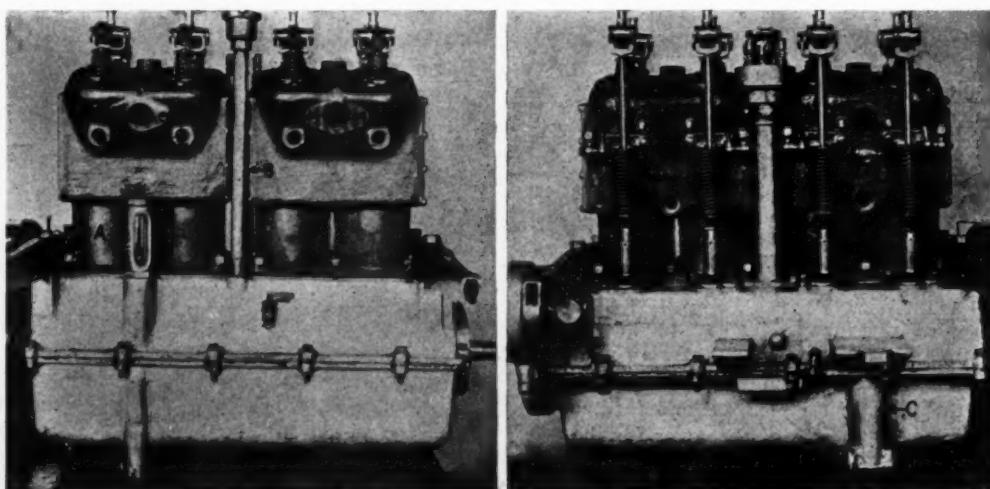
road obstructions. The tie rod between the steering knuckles is in front of the axle. In the body work a change is covering the wood construction with cheap metal instead of a special textile fabric, the apparent aim being that while textiles are subject to variations in climatic conditions in various countries, sheet metal is not, the result being that a better enduring finish is possible. The body lines are practically as at present, except that the tonneau rear is a straight line from the base of the seat to the top, whereas it had a slight reverse curve; there also is a simplification of the tonneau door lines and the tonneau side lines at the same place. The different models are all alike in the employment of the oval radiator filling cap—a distinguishing Stoddard-Dayton mark—the straight wood dash and the throttle and spark controls or sectors under the steering wheel rim at the left where they may be controlled with the fingers of the left hand while the right hand is engaged in making changes of speed are other marks by which the cars for 1909 may be recognized.

Before going into detail on several of the systems in vogue on Stoddard-Dayton cars an enumeration of the models will serve as an introduction to some of these systems. The three types 9H, 9A and 9K carry motors with the following sizes: 9H, bore 3 7-8 inches, stroke 4 1-2 inches, and rated at 24-horsepower, A. L. A. M.; Model 9A, bore 4 inches, stroke 5 inches, with a formula rating of 25.6; and 9K, the same as at present, bore 4 3-4 inches, stroke 5 inches, giving 36.1 horsepower. The company gives a little higher horsepower rating than these: 9H, 25 horsepower; 9A, 35, and 9K, 45. The little 9H has undergone the most changes, now having the valve in the head motor, a wheelbase of 103 inches instead of 92, 32 by 3 1-2-inch tires, chrome nickel transmission, drive shaft and rear axle parts, larger brakes, a heavier frame and the motor stroke increased from 3 3-4 inches to 4 1-2 inches. This little car has body lines identical with the bigger brothers and is made with a detachable tonneau as well as regular two or three-passenger roadster. The Model 9A is a new style, coming as a half-way step between the little Model 9H and the big Model 9K. It is a five-passenger touring car with 105-inch wheelbase and 34 by 3 1-2-inch tires. As a roadster it is known as 9C, having a wheelbase 110 1-2 inches long in order to give a good suspension of the motor with relation to the front axle and introduce a rakish steering

column. The big car Model 9K is the present Model 8K put through the metamorphosis process for 1909, as already delineated. Its wheel base measures 120 inches, and when fitted for seven passengers carries 34 by 4 1-2-inch rear tires and 4-inch sizes when fitted for five passengers. As a roadster this car is known as Model 9F and uses a 113 1-2-inch wheelbase.

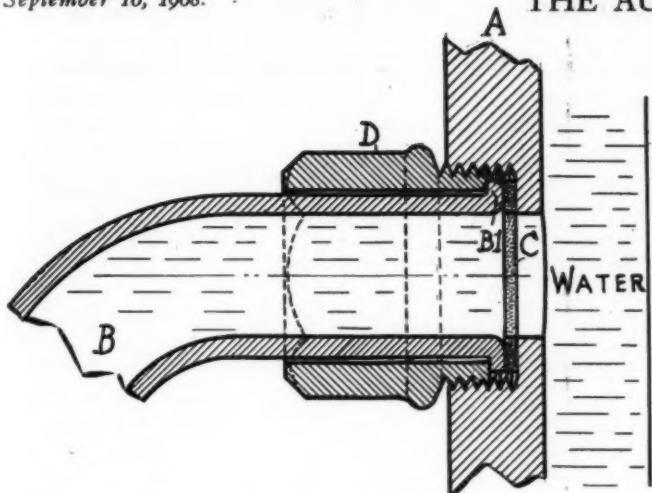
No part of the motor in all models offers greater interest than the oiling system, which in brief is a crankcase contained system, in which the lower half of the crankcase is divided horizontally by a sheet metal partition, that part beneath it being an oil reservoir in which a vertical plunger pump driven by eccentric off the camshaft and which pump delivers oil into a manifold attached to the upper half of the crankcase. From this manifold the oil is delivered to the crankshaft and camshaft bearings and the timer shaft. The overflow from these leads falls into the upper half of the crankcase and is refiltered into the oil reservoir. The system is therefore not a splash one but a positive transporting of oil to every motor bearing as well as to the cylinder walls. The manifold distributes oil by leads to the end bearings of the crankshaft, to the center crankshaft bearing, to the end bearings of the camshaft, to the timer shaft and to a sight gauge on the dash. Fig.—shows how each crankshaft bearing is lubricated. The oil lead *A* pours its contents into a pocket *B* above the bearing. In the bottom is a hole conducting the oil direct to the bearing but which outlet is not so great as the supply of the pipe *A*, with the result that the pocket overflows as indicated, the surplus dropping into a bronze ring *C*, carried on the throw of the crankshaft. This ring has a peripheral groove specially designed for catching this overflow and has an elliptical extension carrying an outlet *E* through which the oil finds its way into the bored crankpin of the crankshaft, centrifugal force driving the oil through this course. The crankpin is bored with an outlet *D* to lubricate the lower bearing of the connecting rod. In this system the oil has to be conveyed to the upper connecting rod bearing, which is done by attaching a copper tube to the side of the connecting rod. The rod at its lower end has an opening through the lower connecting rod bushing and at its upper end a similar opening through the wristpin. The oil once raised into the wristpin flows through it and reaches the cylinder walls which it lubricates. By means of an opening in the top of the wristpin oil is by the reciprocation of the piston thrown through this hole and, dropping, finds its way to the end bearings of the wristpin. Thus is the lubricating liquid positively conducted to the three crankshaft bearings; thence to the lower bearings of the four connecting rods, thence to the upper bearings of the connecting rods, and thence to the cylinder walls. It will suffice to say that the camshaft is similarly cared for, the overflow soon finding its way back to the reservoir.

A few words as to the care in oiling the vertical commutator

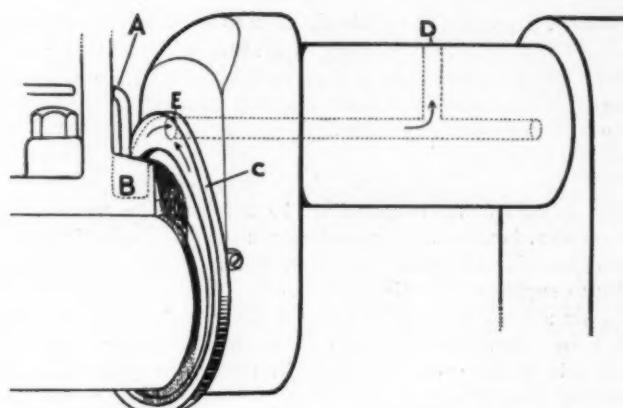


Intake and Exhaust Sides of Stoddard-Dayton Model H Motor.

A—Oil gauge showing level in crank case. B—Oil filler for crank case and oiler. Same in all models. C—Marks location of plunger oil pump. The channel support beams for motor are used only in this model.



Attachment of Engine Water Pipe to the Cylinder.



Lubrication of Crankshaft and Lower Connecting Rod Bearing.

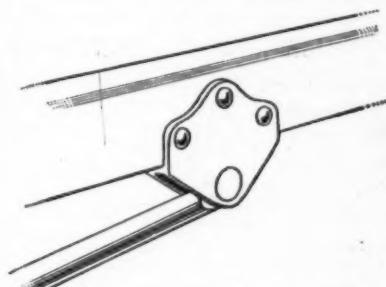
shaft at the side of the motor is necessary. The hardened commutator shaft carrying on its lower end a driving bevel and on its upper end the revolving contact is supported in an aluminum casting within which is a bushing. A separate oiler lead pours lubricant into a cup ring receptacle on the base of the casting in which are holes to conduct the oil to the revolving shaft. On the shaft is a spiral groove which carries the oil upwards, distributing it through the entire ascent. The surplus at the top finds its way to the center of the mechanisms lubricating the plunger and other parts and is conducted to the space between the bushing and the aluminum castings in which it falls to the base again ready to overflow and lubricate the central camshaft bearing.

The plunger pump on which rests the burden of this complete circulation is carried in the lower half of the crankcase. The reciprocating plunger carries a roller on its top which contacts with the driving eccentric on the camshaft. This eccentric forces the plunger down and a spring lifts it. During the upward stroke oil enters the casing through a series of holes immediately beneath the plunger when at the top of its stroke. On the down stroke oil is forced out into the crankcase until these holes are closed by the plunger, after which the oil escapes through a lead to the distributing manifold already, its passage being by a check valve which prohibits its return. The pump can be dropped by removal of a casing secured to the base of the crankcase by three bolts. The pump has a 7.8-inch diameter and 3-4-inch stroke. Locating the pump so calls for 9 inches of external tubing, the only oil pipes seen around the motor, this length connecting from the exit of the pump to the upper part of the crankcase where connection is made with the distributing manifold. Attention is drawn to the oil gauge on the crankcase, which tells the level in the oil reservoir. It is a tube extending into a pocket in the base of the crankcase, a cork resting in the bottom of the tube and connecting by wire with a "flyer" in the aluminum top or gauge part. So delicate is the device that the addition of a pint of oil to the reservoir supply results in a lifting of the "flyer." The oil is fed to the crankcase or oiler through a filler tube rising to the top of the cylinders at the side. On the other parts of the car are compression grease cups in numbers. The valve rocker arms carry two each; the fan shaft has one, others

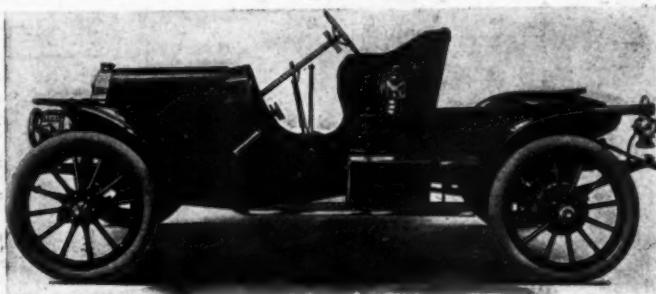
are on the pump and magneto shafts, and in a review of the chassis they are positioned on universal joints, steering gear parts and spring bolts.

The manufacture of the upper half of the crankcase has been facilitated by removing the elevations on which the valve lifter rod guides rested in 1908, so that now the part of the crankcase on which these rest is on a level with the part supporting the four cylinders, so that the milling of all these parts is done with one operation instead of two as formerly. This year four gears were needed in the front of the motor, the camshaft gear being a double one, the large diameter part meshing with the cam-shaft pinion and the smaller diameter part for driving the pump and magneto shaft. By a nicety of dimension it is possible now to employ but three gears, the crankshaft pinion driving the camshaft gear and this in turn driving the magneto shaft.

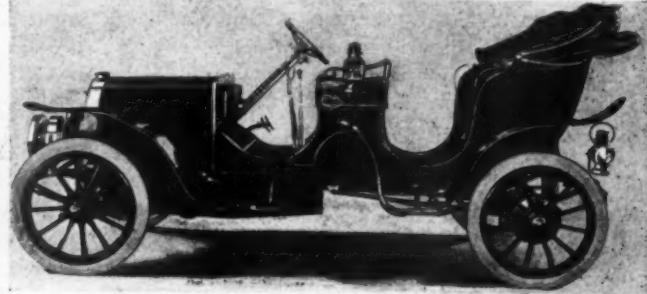
The Stoddard-Dayton cars are essentially homemade products. A foundry owned and operated by the company furnishes all of the cylinder castings, all the aluminum castings for the crankcase, gearbox, commutator support and all of the brass parts. In the steel building the side members of the pressed steel frames are forged, burnished and mounted together; in the same building all parts of the springs are made; side by side with the forges for making gear blanks and frames are those for making the one-piece front axles, the steering gear parts and the score of other forged parts that enter into the sum total of the car. All gear cutting is done in the machine shop, bodies are all made in a separate compartment. This delineation of home manufacture could be continued, but it will suffice to state that, with the exception of the electrical parts, carburetor, wheels and Timken bearings, the car is a Stoddard-Dayton product.



Attachment of Radius Rod Bracket to Frame.



Model 9H 25-horsepower Which Sells for \$1,500.



Model 9N Victoria Phaeton, a \$2,000 Pattern.

NOW THE AUTO THIEF IS IN EVIDENCE.

Detroit, Sept. 7.—The epidemic of auto thievery sweeping Detroit has roused local motorists to a sense of their helplessness under existing conditions, and plans are being laid looking toward legislation that will land the man stealing an automobile behind the bars just as surely as it now does the one who steals a loaf of bread.

There was a time when the owner of a machine felt secure if on leaving his machine he removed the switch plug. Not so now, however. The modern auto thief apparently carries a complete line of parts with him, and is able on a moment's notice to supply the missing article.

Within a week no less than half a dozen high-priced machines have been stolen as they stood on the streets, and several private garages have been broken into. In nearly every instance the machines have been recovered where abandoned when they broke down or the fuel supply was exhausted. Several are still numbered among the missing, however. That the thieves are not wholly devoid of a sense of humor is shown by the fact that John Dodge, of the Ford Motor Co., and Wm. F. Metzger, of the Everett-Metzger-Flanders Co., are among the victims.

At present there is no law covering the theft of an automobile, and the thief, even if caught with the machine in his possession, can only be given a slight fine or a short sentence at the workhouse. This fact has emboldened the thieves, but their harvest will soon be at an end if legislation planned becomes a reality.

CLEVELAND POLICE AFTER SPEEDERS.

CLEVELAND, Sept. 8.—Every "crossing cop" in the city holds a stop-watch in his hand; the bicycle squad has been increased 300 per cent.; orders have been issued to spare no motorist caught speeding. This, in short, is the condition of affairs in this city since Chief of Police Kohler recently decided that speeders belonged in the police list of "undesirables." It may be interesting to note in passing that the other "undesirables" consist of tramps, pickpockets, confidence men, burglars, yeggmen, suspicious characters, released convicts, etc.

Just what started the war is not known, as there had been very few complaints of speeding. But the Chief started in to "clean up the city of all undesirable characters before Winter," and so the poor man who drives a motor car finds himself up against it.

BALTIMORE DOESN'T WANT 'EM, YET.

BALTIMORE, Sept. 7.—Automobile fire engines, hose wagons and trucks will not be used in the Baltimore department yet awhile, as Chief Horton has decided that the horseless machines are not yet reliable enough for fire-fighting purposes. He has asked the Board of Fire Commissioners to furnish himself, his deputy chief and the district chiefs with steam automobiles to replace the present horse-drawn carriages.

BALTIMORE'S CLUB HELPING POLICE.

BALTIMORE, Sept. 7.—The crusade against those autoists who persist in speeding their machines within the city limits and on the crowded thoroughfares of the counties have had to pay numerous fines the past week. This crusade is a joint affair with the Automobile Club of Maryland, the Grand Jury and the motorcycle police on the one side and the autoists who attempt to evade the law on the other. Several local dealers have been among those who have fallen into the trap and they have been compelled to pay from \$10 to \$25 and costs for their sport.

KOKOMO'S FIFTEENTH AUTO ANNIVERSARY.

KOKOMO, IND., Sept. 2.—With a program of races and other events, the fifteenth anniversary of the building of the first gasoline automobile by Elwood Haynes of this city, was celebrated here to-day. The day was made a holiday, business houses and factories closing and hundreds of persons from all parts of the State gathering for the celebration.

The celebration was arranged by the Kokomo Automobile Club, assisted by business men, and cash prizes were awarded to winners of the various events which were held on downtown streets. The principal streets were roped off and for several hours were in the possession of automobiles and their drivers.

About 100 automobiles appeared in the parade, which was led by a band and a Rapid Pullman sight-seeing car carrying a party from Indianapolis. Many of the cars were artistically decorated, although the decorations consisted largely of flags and bunting.

OHIO REUNION OF OLDSMOBILERS.

AKRON, O., Sept. 5.—Seven miles of Oldsmobilers came from Cleveland, and their owners, with many others from other cities, attended the "grand reunion" of the Oldsmobile owners given by the Oldsmobile Company in Akron and at Long Lake. It was perhaps the largest procession of Olds cars ever seen in Ohio. Fifty-four cars came from Cleveland, and there were seventy-eight machines in the grand parade on the principal streets of the city and to Young's Hotel at Long Lake, where a sumptuous chicken and fish dinner was served.

The reunion was brought here because the Akron agents, Auble & Wood, of the Akron Automobile Garage Company, are the oldest agents of the company, A. Auble, of the local company, having been its agent since 1900. He has added to his fame by driving a perfect score car in the recent A. A. A. tour, and he will also drive a 1909 model in the endurance run starting Claude Foster. Another car present was the first car built with four-inch wheels for pneumatic tires. Among the cars with out of Toledo next Tuesday. This model was driven here by histories present were the Mudlark and Frank Work's *Wanderlust*.

After the drive to the lake and a photograph taken, a number of interesting contests were had, the slow race of cars on high gear exciting the most attention.



Photograph Taken at Long Lake, near Akron, O., of the Participants in the Oldsmobile Reunion.



Rambler Cars Being Tested on the Factory's Tarviated Half-mile Track.

The Factory Testing Track.—Most automobile manufacturers maintain a track of some sort where they can test new machines unhampered by local speed restrictions, but when these are constantly used by cars at high speed the problem of keeping them in repair often becomes pretty serious. The Thomas B. Jeffery Company, at their factory in Kenosha, Wis., had considerable trouble from this source, and experimented for some years with macadam under oil treatment and other road preparations, but all were found unsatisfactory until the Tarvia process was adopted. As every Rambler car, before being delivered to the purchaser, is run for about two hundred miles, this makes some fifteen or twenty cars running at high speed over the half-mile track every hour in the day. On the ordinary macadam track holes would immediately appear and the dust would be unbearable. Since Tarvia has been used, however, the track is entirely without dust, the surface coating makes it impervious to water and it is so elastic that the wear on the tires of the car being tested is greatly reduced. The success of the preparation on the Rambler track was so marked that it is now being used on all the nearby roads.

G & J Tires Reduced.—"It's a long story briefly told," said the sales manager of the G & J Tire Company, when asked for an explanation of the reduction in prices which took effect September 1. "To manufacture a moderate output requires precisely the same overhead expense for factory administration as a big output, and practically the same selling expense is involved. The 1908 G & J tire, when brought out last fall, met with such favor that we were encouraged to nearly double the already large equipment we had installed to manufacture it. Another important factor heretofore has been the large number of replacements required under the guarantee put on the tire. Our guarantee is still there, but our replacement department has been practically idle this summer. The tires have stood up so well that replacements have been an insignificant item of expense. All these things have naturally reduced the cost of production, and as soon as we became certain of this, we decided that the quicker we gave the consumers the benefit of the reduction the better it would

be for us and for the automobile game in general."

Pierce Arrow Changes.—1909 Pierce Arrow cars will have the change-gear lever at the side of the car instead of on the steering column, and will also have a four-speed selective gear instead of the three-speed progressive type used heretofore. In explaining this change Col. Charles Clifton, the head of the Pierce Company, says: "We are firmly convinced that our old style was all that could be asked for in the way of a gear shift, but it was a question of our company against the world. The public has been educated to the idea of the selective gear, and we found it easier to make our cars conform to their way of thinking than to attempt to swing the balance of opinion our way. We are using the four-speed type because the public has been taught to look for this in cars of our power."

Exit the Tire Pump.—Not satisfied with having relieved Winton users of the arduous work of cranking, thanks to his self-starting device, Mr. Winton has gone a step further and abolished the tire pump. Attached to the self-starting cock on the dash of the new Winton Six is a nipple to which the user screws a rubber tube, the other end of which he attaches to the tire in need of inflation. Then he opens the cock and takes a rest, while compressed air from the starter tank rushes into the tire and fills it up. No one who has ever pumped up a tire on a hot summer day need be told what a convenience this is.

Firestone Salesmen's Reunion.—The annual meeting and reunion of the salesmen of the Firestone Tire and Rubber Company was held last week at the company's headquarters in Akron, O. There was a conference Thursday morning at which the past year's labors were reviewed and plans were outlined for the coming season. In the afternoon the gathering was taken to Summit in launches, and that evening they attended the theater. Friday evening the annual dinner was held at the Portage Country Club, and Saturday the conference was finally concluded.

Reo Stockholders Meet.—The annual meeting of the stockholders of the Reo Motor Car Company was held last week in Lansing, Mich., and the report shows

the past year to have been the most successful in the history of the company, in spite of the industrial depression. The total volume of business during the last fiscal year amounted to \$4,800,000. The officers of the company are the same as last year, namely: President and general manager, R. E. Olds; vice-president, Reuben Shettler; secretary and treasurer, E. F. Peer; general superintendent, R. H. Scott, and cashier, D. E. Bates, these also constituting the board of directors.

Look Out for St. Louis.—Benajmin Gerdeleman, the St. Louis agent for the Jones Speedometer Company, has just secured an order from the police authorities of that city for the complete equipment of the motorcycle squad. The speedometer which will be furnished is practically the same as that used on automobiles; it is attached to the handlebar and driven by flexible shaft and gears. The scale reads to sixty miles an hour. Speed enthusiasts had better keep their eyes open now, for the cops "will get them if they don't watch out."

A New Continental Tire.—J. M. Gilbert, manager of the Continental Caoutchouc Company, New York, announced recently a new type of Continental, to be known as the "A-C" Flat Tread. Although sold at regular round tread prices, the new tire will have a straight guarantee of 3,500 miles service. The surface of the tread is corrugated, making it cling to the ground and giving greater speed. This corrugated tread also prevents skidding, and it is claimed that chains will not be needed when it is used.

Premier Century Run Ends.—The Premier Century car which started June 1 to cover 100 miles for 100 days, completed last week its one hundredth day's run and is now in Chicago little the worse for wear. It has covered in all more than 12,000 miles over all kinds of roads, through mud and sand and over mountains. President H. O. Smith of the Premier Company intends to have some Western club appoint a technical committee to examine the car after it has been taken apart.

A Fast Long-distance Tour.—Harry W. Byron of Mercersburg, Pa., has just arrived in Portland, Me., in his six-cylinder Franklin. He traveled 1960 miles in twelve days, running on an average ten miles a day. Mr. Byron declares that of all State roads those of Pennsylvania are the best. He attributes this to the fact that the roads are not so wide as others, but are crowned higher and rolled wet. They are especially good in the northeastern part of the State.

An 1897 Model for Sale.—The first automobile police patrol used in the United States, that of Akron, O., is offered for sale because of the purchase of a new and more modern machine. It was built by the city electrician, F. F. Loomis, in 1897, and has been in service ever since. In the riot of 1900 it was wrecked and thrown into a ditch, but was repaired and has since carried many hundreds of unhappy prisoners to the calaboose.

Ajax Tires Lower.—The Ajax-Grieb Rubber Company, of Trenton, N. J., has announced a material reduction in the prices of their tires for 1909, to take effect immediately. This has been made possible by largely increased production. For months past the company's plants have been working day and night shifts, in order to supply the ever-increasing demand for "the tire with the 5,000-mile guarantee."

THE AUTOMOBILE.

September 10, 1908.

Enter "The Vanderbilt."—B. S. von Rottweiler, until recently chief engineer and designer of the Fort Pitt Motor Mfg. Co., has organized a new concern to be known as the Mercedes Motor Mfg. Co., of New Kensington, Pa., and will bring out a new car, which will be called "The Vanderbilt." It will have a six-cylinder 75-horsepower engine and the price will be about \$4,000.

Michelin Lowers Prices.—The Michelin Tire Company has just announced that the unexpected volume of business which has poured into their year-old American factory at Milltown, N. J., has enabled them to bring their production up to a point where their prices can be revised. The new list went into effect September 1 and consumers will derive a distinct benefit thereby.

Highway vs. Railway.—During the month of August 1,326 persons arrived at Hotel Mount Washington in automobiles, coming in 314 machines; arrivals by train were 630. Of course, most of the automobileists were transients only, but even at that no wonder the shrewd New England hotelkeepers are hastily building garages and buying in gasoline.

Fire Departments Up to Date.—The city of Frederick, Md., has an automobile fire engine and hose wagon in service and it has done some good work. The apparatus has three streams, with a pressure of from 125 to 150 pounds. The engine throws 450 to 550 gallons of water per minute. The hose wagon body carries 1,000 feet of fire hose.

News from Toledo.—B. O. Gamble, for several years the manager of the Toledo Motor Car Company, has just purchased the business and good will of that concern, which henceforth will be known as the Gamble Motor Car Company. Until a new building can be erected the business will be continued at the present location, 1115 Madison street.

Sailing to Savannah.—A large party of enthusiastic automobileists will sail for Savannah November 18 on the steam yacht "Idler," as the guests of Messrs. Fleming, Kull and Hamilton of the Gyroscope Automobile Company. On board the yacht will be the two Gyroscope cars which have been entered for the small car race.

Know Your Oil.—The Vacuum Oil Company of Rochester, N. Y., has brought out a booklet which will make it possible for the automobile owner to select the grade of oil best adapted to his car. It is claimed to contain the correct brand of Mobiloil for use in every car ever made.

The Driver and His Oil.—In a conversation with the representative of the A. W. Harris Oil Company just after the Lowell race on Labor Day, Lewis Strang, the winner, stated that he has used Harris oil in all of the three road-races which he has won—at Briarcliff, Savannah and Lowell.

Taxicabs for Baltimore.—The eighteen taxicabs to be operated in Baltimore by the Baltimore Taxicab Company are due to arrive this week. One of them was on hand last week and made a trial trip which proved very satisfactory. The cabs are the product of the E. R. Thomas Motor Company.

Oakland in the Glidden.—The Oakland Motor Car Company of Pontiac, Mich., is sending out a booklet telling the story of the Oakland entries in the Glidden Tour. It is attractively made up and is interesting reading. Copies will be mailed on request.

IN AND ABOUT THE AGENCIES.

Maxwell.—W. P. David has withdrawn from the Kelsey Motor Car Company, which represents the Maxwell car in Philadelphia, and W. C. Longstreth, the other partner, will continue the business alone at 204 North Broad street.

Chalmers-Detroit.—In the future the Chalmers-Detroit will be represented in Pittsburgh by the Bunker Brothers Company. Already a number of applications have been made for sub-agencies in Pennsylvania and West Virginia.

Chalmers-Detroit.—The Levy & Hippie Company, Chicago representatives of the Chalmers-Detroit, have completed plans for a three-story garage and retail establishment on Michigan avenue. The building will be white tile, 42x162 ft.

Elmore.—The Elmore Motor Company, of Los Angeles, Cal., has begun the erection of a new garage at 742 South Olive street, and expects to have it ready for occupancy October 1. It will be 80x167 feet, with a machine shop and ample storage room.

Stewart Speedometers.—The Stewart & Clark Mfg. Co., of Chicago, announces that it will shortly open a branch office in New York, which will carry in stock a large supply of Stewart speedometers and will have every facility for making prompt installations.

Premier.—Webb Jay, the well-known automobileist and former racing man, will handle the Premier in Chicago during the coming season. The Premier Century car, which has just completed its "100 miles a day for 100 days" schedule, is now in Chicago and is on exhibition at the Webb Jay Motor Car Company, in the Harvester Building, Michigan avenue and Harrison street.

PERSONAL TRADE MENTION.

C. E. Smith.—Who has been acting as traveling representative of the Fisk Tire Company, will in the future make Los Angeles, Cal., his headquarters, as assistant to C. O. Du Mars.

"Joe" Keir.—Formerly Renault and Fiat and Samson-Michelin tire agent in Philadelphia, has just closed with the Ajax-Grieb Rubber Company, of Trenton, N. J., to represent that concern's product in the Quaker City.

Russell E. Gilliam.—Formerly manager of the Empire Tire and Supply Company, has been appointed manager of the Newark, N. J., branch of the Empire Tire Company. He will be located at 264 Halsey street.

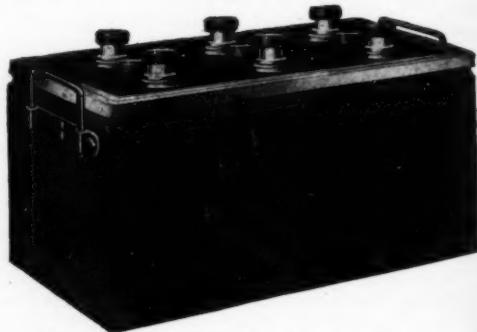
Fred D. Rathbun.—Formerly New England traveling representative of the Studebaker Company, has joined the

forces of the Electric Vehicle Company. A large two-story garage will shortly be erected in Hartford, Conn., at Farmington avenue and Owen street, to handle gasoline and electric Columbias.

Charles B. Shanks.—Sales manager of the F. B. Stearns Company, will leave September 14 on a trip to the Pacific Coast, to establish a system of agencies from Vancouver and Seattle to Los Angeles. A branch house will be organized in California shortly if the trade comes up to expectations.

INFORMATION FOR AUTO USERS.

Willard Automobile Lighting Battery.—The strong and growing demand for electric light on automobiles makes this product especially acceptable, while the advent of the Tungsten lamp now makes it possible to electrically light a gasoline car very economically. The Willard Storage Battery Company of Cleveland, O., has for years manufactured the majority of the batteries used in this country for train lighting. The type E. L. B. battery, which has been designed for automobile work with Tungsten lamps is of the train lighting type, as the work required of the battery is practically iden-



Willard Automatic Lighting Battery.

tical with that required in train and Pullman car lighting. A number of very practical improvements are embodied in the construction of this battery. One is a chamber designed to receive the overflow of solution caused by expansion during charging. This construction also prevents any solution reaching the outside of the battery as a result of careless handling. The cells of the battery are placed in an acid-proof case, which is lined with lead. Each individual cell has its own cover, which is sealed into a frame at the top of the lead lining. Each cell also has its individual set of terminals. A band of hard rubber is vulcanized around each terminal to prevent the creeping of acid and consequent corrosion.

"Permanit" for Auto Tires.—A powder has recently been put on the market by Adolf Karl & Co., 239 Washington street, Newark, N. J., which they claim will not only prevent leakage of tires from punctures and blow-outs, but will also preserve the life of the rubber. "Permanit" not being a solvent in water will not form a paste or glue which might clog the valve, but on the contrary, when a puncture occurs the powder comes in contact with the outer air and causes a chemical reaction, whereby the injured part is healed. Because of the small amount necessary (only eight ounces to a tire), it can be used for high speed work.

"Permanit" is imported from Europe and is introduced for the first time in the United States. It is sold in cartons.



Two Leading Mitchell Exponents.
President William M. Lewis, at wheel, and
Sales Manager James W. Gilson of the
Mitchell Motor Car Company.